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ABSTRACT

This report on a master's project begins with a review of the research literature on instructional materials in Australia which emphasizes Australian research and how it compares with a similar body of research published by American scholars. It is noted that the intent of this comparison is to identify where research in Australia can be applied more effectively to improve curriculum development and educational change. The analysis of the literature, which is limited to journal articles published since 1975, includes a detailed review of the topics covered in the bibliography and a discussion of the common curriculum framework for Australian schools and the implications of research on instructional materials. The annotated bibliography is divided into two major subject categories: (1) Producers and Consumers, which covers Instructional Materials and School Programs (use and curriculum role, selection), and the Production and Marketing of Instructional Materials (the publishing industry, innovation and reform); and (2) Evaluation and Criticism of Instructional Materials, which covers General Discussion and Special Topics (general references, readability, treatment of minorities and women); Subject Matter Content Coverage (language arts, mathematics, reading, science, social studies), and Ideology and Controversy (ideology and instructional materials, controversy and censorship, evolution theory and creationism). The 181 articles cited and their annotations are listed in alphabetical order by authors' names under the appropriate subject headings. Three indexes provide access to the main entries: article titles listed alphabetically by author, an author index, and a subject index. A list of references cites an additional 167 sources, and a list of 97 journals published in Australia and the United States is provided. (DB)

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Instructional Materials in Australian Education

A Review and Annotated Bibliography of Articles on Research

Michael G. Watt

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Submitted in partial fulfilment of the requirements for the Master of Education (Qualifying) degree at the University of Tasmania.

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1. INSTRUCTIONAL MATERIALS IN AUSTRALIAN SCHOOLS: A TOPIC FOR RESEARCH

School books have played an important part in classrooms of Australian schools since the colonial period of European settlement. The first school books, published in Australia during the mid-nineteenth century, were basal readers. The most widely used readers in Australian schools during the late nineteenth century, however, were adaptations of a series produced by the Irish National Board of Education. These were replaced by *The New Australian Series*, first published during the 1890s, because their content was recognisably Australian. James Bonwick, an inspector of denominational schools in Victoria, was the first notable Australian author of textbooks, which he wrote for all subject areas during the late nineteenth century. Although his textbooks were used, most readers and textbooks used in Australian schools at that time were imported from Britain.

The number of Australian authors of textbooks increased markedly from the last decade of the nineteenth century. They wrote textbooks for all subject areas, but these were only aimed at the primary level. The introduction of secondary education during the early decades of this century led to an extension of textbook publishing in Australia to cater for this level. The content of Australian textbooks during the inter-war years reflected increasingly the curricula implemented by state education departments. The earlier, slender textbooks published in Australia gave way to more substantial ones, which incorporated new educational theories and advances in knowledge. In spite of these developments, most textbooks used in Australian schools until World War II continued to be imported from Britain.

The use of imported textbooks in Australian schools continued during the post-war period, although the main source shifted to the United States. An important consequence of curriculum reforms, occurring in state education systems in Australia during the late 1960s and 1970s, was the recognition that a national agency was needed so that instructional materials could be published that met the requirements of these reforms. Founded in 1973, the Curriculum Development Centre became an important developer and publisher of a wide variety of instructional materials, thereby increasing the proportion of Australian publications used in schools. A more recent agenda for educational reform during the late 1980s led to the restructuring of national educational agencies, including the replacement of the

Curriculum Development Centre by the Curriculum Corporation. The intent of the Curriculum Corporation is to coordinate activities for researching, developing and implementing a common curriculum framework for Australian schools, which includes the development and publication of curriculum materials associated with such collaboration. The involvement of a national agency, supported by the educational community, has been an important supplement during the last two decades to the function of commercial publishers in providing instructional materials.

Instructional Materials as a Topic for Research

General references to the history of Australian education during the nineteenth and twentieth centuries give scant attention to the part played by instructional materials in the educational process. Research and commentary on the topic has only appeared recently: Bryant (1980) investigated changes occurring in teaching and learning methods and curriculum materials used in geography programs in Victoria between 1850 and 1910; Polya (1986) examined textbooks used in science programs in Australian schools between 1850 and 1939; and Clarke (1986) examined Australian content contained in syllabuses, textbooks and teachers' guides used in Queensland schools between 1860 and 1970.

Little attention also appears to have been paid in the reports of governmental departments in Australia to the instructional materials used in schools. The Department of the Media (1974) issued the first important report on an inquiry into the production and dissemination of instructional materials to primary, secondary and higher education levels. The report made several recommendations, including involving the Curriculum Development Centre in coordinating the dissemination of instructional materials and producing materials for minority groups, abolishing closed market practices in commercial publishing which hindered the importation of instructional materials from the United States, and arranging to produce locally imported materials for which there was a substantial market in Australia. Anderson (1981: item 004) reported the results of a survey of teachers and consultants in New South Wales, Queensland, Victoria and South Australia on the value and appropriateness of instructional materials produced by the Language Teaching Branch of the Commonwealth Department of Education for English as a second language. The findings indicated that the materials were widely accepted by the respondents. Marsh et al. (1981: items 010 and 011) reported a study, using a three-stage research design of case

studies and representative interviews to formulate items for a final questionnaire, to survey a sample of teachers in Western Australian primary schools on their perceptions of the processes used to select, distribute and use instructional materials. The findings indicated that they were not actively involved in these processes. A number of reports have been issued by state departments of technical and further education on the use of instructional materials, the most important being a study reported by Brown et al. (1982). They surveyed a sample of teachers in TAFE colleges in South Australia, Victoria and Tasmania, concluding that whilst administrators and some teachers perceived a low priority for the provision of instructional materials, the change from the use of teacher-centred to learner-centred methods encouraged increased attention being paid to the development, production and use of instructional materials.

The articles annotated in this bibliography, however, show that researchers are giving more attention to specific issues relating to instructional materials. This has apparently occurred, in spite of the lack of recognition by educational authorities in Australia that instructional materials are important elements in any effort to reform education. Recent reforms in state education departments in Australia have not sought to accomplish curriculum reform through the widespread use of new forms of educational management, such as aligning the objectives, textbooks and tests used in educational programs, but rather at redefining curriculum options to meet the needs of a changing student population.

The review of articles annotated in this bibliography emphasises comparison with a similar body of research published by American scholars. In some cases, similarities between aspects of research in the United States and Australia are identified by this comparison, whilst in other cases, there are evident differences. The intent of such comparison is to identify where research in Australia can be applied more effectively to improve various problems inherent within instructional materials, especially in the context of their use in classrooms.

2. STRUCTURE OF THE REVIEW AND BIBLIOGRAPHY

Purpose

This bibliography arose from a review of *Textbooks in School and Society: An Annotated Bibliography and Guide* by Arthur Woodward, David Elliott and Kathleen Nagel, published in 1988 by Garland Publishing. Their bibliography is intended as a reference for researchers and educators interested in the most significant contributions to our knowledge about textbooks. This bibliography is intended to draw upon a similar audience, although it will be of particular interest to Australian researchers and educators.

The purpose of the review is to analyse a sample of research literature on aspects of instructional materials and their relationship to education in Australia. The analysis has five objectives: to analyse the findings of research in each of these aspects; to compare the findings of the Australian research with the American research annotated by Woodward et al.; to determine the extent of research about aspects relating to instructional materials in past and present activities for curriculum reform; to evaluate the quality of research in the area of managing information on instructional materials; and to identify the roles of national educational agencies, state education departments and the commercial publishing industry in each aspect.

Subject and Scope

In their bibliography, Woodward et al. cite references to research literature on aspects of textbooks, their relationship to the curriculum and policy-making in the programs of American schools. The design of their bibliography reflects a concern with issues relating to textbooks that have become topical in American education, such as instructional design, content coverage and accuracy, selection standards and adoption practices, and censorship.

In some cases, these aspects also form topical issues concerning the use of instructional materials in Australian schools, whilst in other cases, they are less evidently matters of concern. In spite of these differences, these aspects form convenient topics to classify research literature on instructional materials. For this reason, the author has adhered to the original classification used by Woodward et al., whilst making some minor modifications in their wordings. These revisions

were necessitated by a deliberate extension of the subject matter within the bibliography to include information on publications describing not only textbooks but other media of instructional materials.

The scope of this bibliography, however, varies in several important details from *Textbooks in School and Society*. Firstly, only descriptions of journal articles have been included in this bibliography whereas Woodward et al. extended their bibliography to cover books, monographs and other printed publications. This decision was made because it was found that journals could be more easily obtained than other types of publication. Secondly, this bibliography includes only articles published by Australian and foreign authors in journals published in Australia and articles published by Australian authors in foreign journals, whereas Woodward et al. include significant contributions from other English -speaking countries as well as the United States. Thirdly, the author has sought to represent a comprehensive rather than a selective coverage of journal articles published since 1975. This was possible because considerably fewer Australian than American works had been published during this period. Because they included within their bibliography noteworthy historical items published before 1975, Woodward et al. were able to compare the concerns that authors of the earlier period held to those of current writers. It would be valuable to draw a comparison between this historical research and a similar contribution in Australia. Although this has not been attempted within this bibliography, it would form a useful area for further research.

Format

Entries are arranged into subject sections as outlined in the Contents' page. Within each section, entries are arranged in alphabetical order according to the authors' names.

A sample entry, illustrating and explaining the types of information typically provided in an entry, is shown below. Each numbered section in the sample designates an item of information that might be included in an entry. These are explained in the corresponding paragraph below, identified by the same number.

(i) 164
(ii) Freebody, P.and Baker, C.D.
(iii) 'Children's first schoolbooks: introductions to culture of literacy'

(iv) *Harvard Educational Review*, 55: 4, 381-398 (1985)

(v) Reports the results of a content analysis of a sample of basal and supplementary materials for beginning readers used in New South Wales, and discusses ways in which beginning reading materials present cultural perspectives to young children.

(i) Reference Number: The number, referencing the entry for citation in the Index, is given. The entries in the bibliography are numbered sequentially.

(ii) Name of Author: The name or names of the authors are given.

(iii) Title of Article: The title of the article is given.

(iv) Title of Periodical: The title of the periodical is given in which the article is located. This is followed by the volume, number and the page numbers on which the article can be found in the periodical. The publication date for the article completes this information.

(v) Abstract: The abstract, providing a brief description of the article, is given.

Sources and Method

The target population comprised articles published in periodicals indexed in five standard references. The search in the *Australian Education Index* compiled by the Australian Council for Educational Research, Hawthorn, Victoria, included the period between January 1975 and June 1990. The search in the *Education Guidelines* compiled by Bibliographic Services, Mt. Waverley, Victoria, included the period between 1979 and 1990. The search in the *Education Index* compiled by the H.W. Wilson Company, Bronx, New York, included the period between July 1974 and November 1990 and was undertaken by identifying relevant articles under the descriptor, textbooks. The search in the *Current Index to Journals in Education* compiled by the Educational Resources Information Center, United States Department of Education, Washington, D.C., included the period between January 1975 and December 1990, and was undertaken by identifying relevant articles listed under the subject index title, Australia. The search in the *British Education Index* compiled at the Brotherton Library in the University of Leeds, included the period between January 1975 and September 1990, and was undertaken by identifying relevant articles under two subject

list titles: Australia; and textbooks.

3. REVIEW OF THE TOPICS

1 Producers and Consumers

1.1 Instructional Materials and School Programs

1.1.1 Use and Curriculum Role

Woodward et al. view recent research into the use and curriculum role of textbooks in American schools to be a response to the two main dimensions of the movement for educational reform during the 1980s. They relate the first, initiatives to increase the level of student achievement, to the dependence of students upon textbooks, and the second, initiatives to strengthen professional control, to the reliance of teachers upon textbooks. The rationale for researching into the use and curriculum role of textbooks lies in determining the extent to which students and teachers depend upon textbooks, because the quality of textbooks affects the quality of teaching and learning in classrooms.

They identify several significant research reports from early this century to recent times supporting the contention that both students and teachers depend upon textbooks. Bagley (1931) reported a survey on textbook dependence, conducted for the National Society for the Study of Education, in which a high proportion of 539 lessons observed involved the use of a single textbook. Gross (1952) reported from a survey of secondary teachers in California that 79% used a single textbook extensively. The Educational Products Information Exchange Institute (1977) conducted the National Survey and Assessment of Instructional Materials (NSAIM) during 1974 and 1975, in which baseline data were gathered from a nationally stratified sample of more than 12,000 teachers. It was found that instructional materials were used between 90% and 95% of instructional time, which included the use of textbooks for 70% of instructional time. More recently, Shannon (1982) reported from a survey of teachers and administrators that, whilst the latter believed in the authority of textbook content, the former relied upon textbooks because of perceived demands by administrators. In testing a model of reading programs derived from this evidence, Shannon (1983) found that reading instruction was standardised by the use of basal readers and objective testing. From an

interpretation of data for the National Assessment of Educational Progress, LaPointe (1986) reported that 95% of teachers use textbooks daily, 90% are satisfied with these instructional materials and 87% use tests included in textbooks.

As a corollary to the research examining teacher reliance upon textbooks, Woodward et al. identify a second area involving investigation into the effect of teacher's guides to textbook programs upon teacher decision-making. McCutcheon (1981) reported research showing that between 85% and 90% of reading and mathematics activities in teachers' planning are based upon suggestions presented in teacher's guides. Woodward (1986) argued that the role of the teacher has changed from a professional to a manager in the 1970s, by inferring from the findings of a study of basal reading series teacher's guides that recent guides present detailed lesson plans for teachers to follow. Duffy et al. (1987) argued that instructional decision-making is impeded by administrative requirements that teachers conform to procedures specified in teacher's guides to basal reading textbooks.

Although articles on several reports about the use of instructional materials in Australian schools are contained within this bibliography, these studies did not investigate student dependence or teacher reliance on textbooks. Both Education News (1981: item 004) and Marsh and his colleagues (1984: item 010; 1985: item 011) reported extensive studies surveying teachers' perceptions of the patterns of dissemination and use of instructional materials in schools. Furthermore, Robottom (1981: item 013), Kennedy (1985: item 008), and Mitchell and Traill (1986: item 012) reported small-scale studies on the use of particular curriculum materials developed by the Curriculum Development Centre.

1.1.2 Selection

Woodward et al. indicate that the large quantity of research, identifying flaws in the prevailing processes for textbook selections, reflects the national concern in the United States to determine a valid textbook selection process. This research has been directed to three main topics: the lack of uniformity among states in their textbook selection processes; the influence that the largest state-wide adoption states have upon marketing of textbooks by publishers; and the recommended steps to be used for textbook selections. Several researchers have analysed the interests influencing the process of decision-making in textbook selections at the school level (Finley,

1979; Clary and Smith, 1979; Fitzgibbons, 1985; and Miller, 1986). This research identified professional groups, teachers, administrators and subject specialists as playing crucial roles. Only a few measures, intended to improve the selection process, are reported in the research literature. These recommend the use of two committees or subcommittees in the selection process (DeRose and Whittle, 1976; Winograd and Osborn, 1985), in-service training materials (Osborn and Stein, 1985; Dole et al., 1987), and the use of a range of evaluative techniques (Muther, 1984).

Whereas the American practices for selecting and adopting instructional materials arose largely as a means to control the content of the curriculum, this has been accomplished in Australia through public examinations. There are no counterparts present in Australian education that match the range of practices mandated by educational authorities in the United States. The informality of the processes used to select instructional materials is reflected in the majority of articles included in this section. Only Laslett et al. (1984: item 037) define a process for decision-making in selecting instructional materials. Several writers discuss the procedures affecting the process for selecting instructional materials, although only the systematic research report by Fincher (1982: item 023) substantiates these anecdotal accounts. Other writers develop criteria for selecting instructional materials based upon variables affecting teaching and learning in classrooms, although only one author argues that such criteria should be matched to the elements of the curriculum. Some authors argue for various groups to be included in the decision-making process when instructional materials are selected, including several urging that students be included. Only a few research studies reporting upon the nature of decision-making in the selection process in Australian schools are included, notably those by Brimble (1981: item 019), Marsh (1983: item 038), and Giddings (1988: item 025).

1.2 Production and Marketing of Instructional Materials

1.2.1 The Publishing Industry

In their survey of literature on the publishing industry, Woodward et al. report that little has been written in professional journals and there are few research reports on this topic, but a number of newspaper articles report accounts of publishers' interviews with reporters. Within this coverage, they found two types of research, one laudatory and the other factual and anecdotal. The former encompassed articles

authored by publishing company executives praising the quality of their publications. The latter included reports on the process for developing textbooks, usually undertaken by development houses with the main function of authors and consultants being to provide a seal of respectability (Edgerton, 1969; Marquand, 1985).

Woodward et al. also indicate that some research is reported on the physical attributes of textbooks, namely, on the increase in their length and on their design qualities (Nietz, 1952). Ostensibly, this research is intended as a function of the marketing of textbooks. They also indicate that articles on learner verification and revision, procedures encompassing gathering and analysing data obtained from field-testing textbooks with appropriate groups of learners and then revising them on the basis of the results, as being related to this interest in consumer influence upon the marketing of textbooks (Educational Products Information Exchange Institute, 1980; Komoski and Woodward, 1985).

Woodward et al. conclude that the publishing industry is by nature both cryptic and inaccessible. The same verdict could be passed upon the commercial publishing industry in Australia in even stronger terms, judging from the few articles written on its activities in professional journals. The articles in this section, however, reflect a wider scope of activities in the production and marketing of instructional materials in Australian education. The majority of the articles relate to the development of specific instructional materials, but also includes several articles referring to innovations in technical facilities that can be applied to develop instructional materials. Another group of researchers have reported on the functions of particular agencies, such as the Australian Academy of Science, Curriculum Development Centre, education centres and curriculum service centres, in producing and diffusing instructional materials to Australian schools.

1.2.2 Innovation and Reform

The curriculum reform movement in the United States during the 1960s redefined the content and teaching-learning methods to be used in the curriculum, as well as producing a vast quantity of instructional materials. Each project developed its own instructional materials designed to accomplish the desired goals of the project in terms of the principles of curriculum reform. These materials had some common attributes; few included a basic textbook but instead used slides, filmstrips, records, cassettes, films, games, simulations, copies of

original documents and primary sources.

Woodward et al. cite several research studies into the effects of such programs as the 'new social studies' upon the characteristics of instructional materials produced during this period (Helgeson et al., 1977; Fetsko, 1979; Schneider and Van Sickle, 1979; Shaver et al., 1979; Welch, 1979; Downey, 1983; and Agostino and Barone, 1985). They also include a number of studies during the late 1970s identifying why instructional materials produced during the curriculum reform movement were no longer being used (Hahn et al., 1977; Weiss, 1978; Shaver et al., 1979; Marker, 1980). In spite of the use of a wider variety of instructional materials, Woodward et al. conclude that the limitations of many of these materials led to a return to dependence upon textbooks during the 1980s.

The curriculum reform movement in the United States stimulated initiatives for curriculum reform in the Australian states when state education departments, professional associations and other educational organisations established projects for curriculum reform during the 1960s. The need felt by participants to extend these reforms nationally led to the Australian Commonwealth establishing the Curriculum Development Centre in 1973. Thereafter, the Curriculum Development Centre coordinated the research, development and implementation of two large-scale projects, the Australian Science Education Project (ASEP) and the Social Education Materials Project (SEMP), by employing processes derived from earlier curriculum reform projects in the United States. Both ASEP and SEMP used teams from each state and territory for curriculum development, showed a commitment to developing 'hands-on' activities as well as the inclusion of process skills, and developed their own sets of curriculum materials targeted to the abilities of all Australian students. Most of the articles in this section refer to two aspects of ASEP and SEMP; either to the processes used to develop, disseminate and implement instructional materials, or to surveying the subsequent use of these products in Australian schools. Furthermore, two articles examine the implications of such projects upon professional development and in-service training. There is no evidence, however, that Australian researchers have reported time-series data on the use of materials produced by these projects that might indicate their continued use.

Hughes and Kennedy (1987: item 056) report upon subsequent projects initiated by the Curriculum Development Centre. Although similar processes were employed in these projects, including those currently

being coordinated by the Curriculum Corporation with the intent of fulfilling a common curriculum framework, a shift in policy within the Curriculum Development Centre away from the production of curriculum materials to curriculum development in collaborations with state and territorial education departments became apparent after the advent of the Core Curriculum Program in 1980. Although the search for titles extended to this later period, there is little evidence of a continuing interest in conducting research into the dissemination and adoption of instructional materials produced by subsequent projects initiated by the Curriculum Development Centre, or its successor the Curriculum Corporation.

2 Evaluation and Criticism of Instructional Materials

2.1 General Discussion and Special Topics

2.1.1 General References

Within their commentary upon general references to research on the evaluation and criticism of textbooks, Woodward et al. draw attention to the influence that two authors, Fitzgerald (1979) and Vitz (1985), have had upon stimulating public interest in the quality of textbooks. They also include within this section citations to historical and recent books and articles on research about textbooks, as well as reviews of research. Within the former category, mention should be made of five significant research studies: the collected work edited by Whipple (1931), which reports studies on various issues relating to textbooks at that time; a special issue of *Phi Delta Kappan* (1952), containing a collection of articles on various aspects relating to textbooks; a collected work edited by Cronbach (1955), which discusses issues about the role of textbooks in education at that time; a study by Elson (1964) of widely used textbooks in the United States during the nineteenth century; and the correlational study by Chall (1977) of textbook quality and SAT scores. Within the latter category, *Review of Educational Research* contains three important reviews of research on textbooks: Otto and Flournoy (1956) reviewed studies on textbooks since the beginnings of such research in the 1920s; Hockett (1959) reviewed research reported between 1956 and 1958; and Davis (1962) reviewed research reported between 1957 and 1961.

Although they use this section to refer to significant historical documents, Woodward et al. state that it contains a potpourri of references that do not fit in any other section of their bibliography.

Broadly speaking, this is an apt description for the same section in this bibliography. Upon closer inspection, however, one is able to discern three main themes among these references: articles that relate to the analysis of instructional materials; articles investigating issues relating to the collection, synthesis and dissemination of information on instructional materials; and articles examining the application of evaluative procedures to instructional materials within particular educational contexts.

2.1.2 Readability

Four issues are identified by Woodward et al. as being prominent concerns of researchers investigating text readability. The first issue involves describing the development of readability formulas or comparing the respective merits of the various formulas (Dale and Chall, 1948; Lorge, 1951; Spache, 1964; Klare, 1975; and Fry, 1977). A second type of research involves the application of formulas to estimate the readability of commercially published textbooks (Bradley et al., 1980; Rowls and Hess, 1984). A related consideration reported in research is the implication that such studies have for the widespread use of readability formulas by publishers and selection committees (Elliott and Wiles, 1980; McKinney, 1983; Wheeler and Sherman, 1984; and Fry, 1987). The most significant issue identified by researchers concerns the validity of readability formulas as indices of text difficulty (Davison and Kantor, 1982; Armbruster et al., 1985). These researchers have reported two major problems with readability formulas: first, they only take into account a few variables affecting comprehension, usually only word difficulty and sentence length, whilst ignoring less quantifiable variables such as content difficulty, organisation of ideas and authors' styles; and second, they neglect external effects upon readers such as motivation, interest, purpose and perseverance.

This evidence has stimulated investigation into either incorporating more factors into readability formulas, or finding more valid means of measuring text difficulty (Irwin and Davis, 1980; Ring, 1983; Feldman 1985). Recent research, however, has concentrated upon determining a judgmental means of matching the difficulty level of prose text to the abilities of students, termed 'considerateness'. Kantor et al. (1983) have proposed that authors may write considerate text by complying to four criteria: choosing a discourse structure; establishing a coherent relationship between ideas; maintaining unity of purpose; and ensuring audience appropriateness. Baumann (1986) has provided research

evidence substantiating that considerate text enhanced student ability to reconstruct or generate main ideas in composition, although there was no effect upon a main idea recognition task.

Three of these issues are represented in the articles cited in this bibliography. Four articles involve the description of readability formulas or the comparison of the respective merits of various formulas. A difference between these articles and the American ones appears to be the greater attention given by Australian researchers to the treatment of cloze procedure (Green and Morris, 1977: item 101; Anderson and Coates, 1979: item 096). Five research studies are cited reporting the application of readability formulas to estimate the readability of commercially published materials, although the implication of this research for publishers is only drawn by Pirozzo (1982: item 105). The discussion by Bouffler (1984: item 098) on the validity of readability formulas as indices of text difficulty represents the only study of this type reported. No research on the topic of considerateness was identified during the search.

2.1.3 Treatment of Minorities and Women

Concern over the treatment of minority groups in textbooks used in American schools arose as part of the drive for civil rights by minorities during the 1960s. Attention focused initially upon American Negroes, the most frequently studied of these groups, in a spate of reports by such organisations as the Anti-Defamation League of B'nai B'rith (Marcus, 1961) and the American Federation of Teachers (Sloan, 1966). Popular magazines, such as *Saturday Review, Atlantic* and *Newsweek* drew the subject to public attention during the mid-1960s. The California State Department of Education (Stampp, 1964) commissioned its own study, and the Committee on Education and Labor of the United States Congress (1966) held hearings on textbooks for schools and the treatment of minorities. Invariably, these studies reported inaccuracies, omissions and distortions in the representation of minorities in textbooks.

It was not until the decision of the United States Supreme Court on the *Lau v. Nichols* case in 1974 that the force of the civil rights movement was sufficient to affect the curriculum in American schools through the Lau Remedies, which gave support to the Bilingual Education Programs (Title VII of the Elementary and Secondary Education Act) enacted in 1968. At the same time, the Ethnic Heritage Studies Programs (Title XI of the Elementary and Secondary Education Act)

introduced into American schools three distinct forms of cross -cultural education: multicultural education which aimed at imparting understanding of concepts such as prejudice and discrimination in common terms for different cultural groups; multiethnic education which involved modifying school environments to provide equal educational opportunities for different ethnic groups; and ethnic studies aimed at transmitting knowledge about the variety of ethnic groups.

These developments led to pressures to exclude biases and stereotyping from textbooks, as well as rectifying omissions and inaccuracies concerning minority groups. Woodward et al. believe that such revisions probably had more influence upon the content of American textbooks than any other force in recent times. They annotate a number of systematic research studies, commencing at this time, on the treatment of ethnic minorities in textbooks (Kane, 1970; Butterfield et al., 1979; Grant and Grant, 1981; and Garcia, 1980), of women and sex roles in textbooks (Trecker, 1971; Shirreffs, 1975; Hahn and Blankenship, 1981; and Bordelon, 1985), as well as the disabled (Baskin, 1981; and Hopkins, 1982) and the aged (Fillmer and Meadows, 1986).

Forces operating in Australian society during the post-war period have been responsible for raising concerns over the treatment of minority groups in instructional materials used in Australian schools. These were outcomes of responses within Australian society towards the influx of large numbers of immigrants between the late 1940s and early 1960s. As a consequence of the overt effort made to assimilate immigrants within Anglo-Australian society during the 1950s and early 1960s, assimilationist attitudes were reflected in their representation in textbooks of the time. The attempt at assimilation had failed by the early 1960s, leading to the immigrants being seen as a minority pressure group during the late 1960s and early 1970s. The acceptance of immigrants as a pressure group within Australian society during the mid-1970s led to a change to a multicultural perspective in their treatment within instructional materials. Not only was this recognised in their portrayal within textbooks during the 1980s, but the content in social studies materials was also interpreted in terms of this new meaning. Such an interpretation has been ascribed by Cope (1988: item 109) to the treatment of minorities in Australian textbooks and other instructional materials.

Comparable interpretations of the representation of sex roles and

sexuality in instructional materials used in Australian schools in earlier times are afforded by Christie (1975: item 108) and Kociumbas (1986; item 115). The remaining articles annotated in this section represent a range of research on this topic: James (1975: item 114) and Anderson and Yip (1987: item 107) report content analyses of sex bias in reading materials; Mortimer (1979: item 121) analyses the effects of sex bias in reading materials; Ives (1984: item 113) and, Rennie and Mottier (1989: item 125), analyse the effects of sex role stereotyping in science materials. The report by Richards (1988: item 126) about a school-based project to develop non-racist instructional materials probably represents the most interesting contribution to research annotated in this section.

2.2 Subject Matter Content Coverage

Woodward et al. restricted their search for titles dealing with subject matter coverage to five core subjects: language arts; mathematics; reading; science; and social studies. This restriction has been maintained in the compilation of articles included in the same section of this bibliography. The articles annotated in this section examine content coverage in the main; only a few deal with other aspects of instructional design such as philosophy and purpose, teaching and learning methods, and the means used for student assessments.

The major theme in the research on content coverage found by Woodward et al. in each of the five subject areas involved the identification of a dichotomy between the 'real' world that students experience and the world portrayed in textbooks. Such analyses indicated that science and social studies textbooks offered selective and, sometimes distorted, content whilst language arts, reading and mathematics materials offered students repetitive sequences of isolated skills. Unfortunately, such a conclusion cannot be inferred from the reported research by Australian authors. This judgment is made on the basis of the quality of the research; with the exception of research reported in the section on science, few studies have reported the time-series data necessary to form this conclusion.

2.2.1 Language Arts

Only a small number of articles on American research about language arts textbooks is identified by Woodward et al., but includes a content analysis of language arts textbooks by Graves (1977) indicating a lack of attention to writing process. A corresponding situation prevails in

Australian research. Whilst the paucity of research in this subject area reflects the lack of recognition that instructional materials influence the quality of teaching and learning, it may well be an indicator of the frequent expressions of concern about the ineffectiveness of language arts programs in Australian schools.

2.2.2 Mathematics

Within this section, Woodward et al. cite several reports on research indicating that mathematics textbooks are inadequate because of inconsistent coverage of topics and lack of attention to problem solving and other higher order cognitive processes (Callahan and Passi, 1985; and Nicely, 1985). In addition, other research focuses upon correlational studies, one to establish the relationship between research and the content of arithmetic textbooks (Dooley, 1960) and another to establish the relationship between mathematics textbooks and tests (Freeman et al., 1983). This evidence of quality in American research on mathematics textbooks contrasts markedly with the small number of articles annotated in the same section of this bibliography. None of these articles includes reported research on the quality of instructional materials for mathematics programs.

2.2.3 Reading

Research into the process of reading comprehension has continued over many years but increased markedly during the 1960s. Attempts to describe the process resulted in several conflicting theories, which have influenced both classroom practice and the content of commercial reading materials. Influenced by behaviourist psychology, information transfer theorists presupposed that reading is a letter-by-letter and word-by-word process in which readers use textual materials in a 'bottom-up' manner, beginning with sound-symbol relationships, moving to vocabulary, then to syntactic rules, and so on. These theories gave rise to the approaches of 'look-say' and 'phonics analysis' used in basal readers (or reading schemes). Information transfer theories were challenged during the late 1960s and 1970s by a number of researchers: Frank Smith argued that the knowledge the reader possesses is critical in predicting the meaning of textual materials; Carolyn Burke and Kenneth Goodman established a relationship between patterns of miscues and reading comprehension; and Marie Clay developed instructional programs based upon these interactive theories which she verified through research data. These researchers believed that reading of textual materials occurs in a 'top-down' manner, implying that

meaning is paramount and other sources of information are accessed according to need. The more recent transactive theories of Rosenblatt and Shanklin, which hold that meaning encompasses more than the written text and reader's knowledge, are extensions of these interactive theories.

In this section, Woodward et al. include a number of reports which reflect these changes in reading instruction. Their survey opens with a landmark publication, a work in which Flesch (1955) argued that the 'look-say' approach should be replaced by the 'phonics analysis' approach. By capturing public attention at the time, this book stimulated considerable interest in the quality of basal readers. They also include three other studies of historical interest: the descriptive analysis by Chall (1967) of basal reading series; the analysis by Bond and Dykstra (1967) of some 27 studies of the relationships between various approaches to beginning reading instruction and student achievement; and the survey by Aukerman (1971) of methods and materials used in 101 approaches to beginning reading instruction.

The emphasis of current research upon the teaching of reading comprehension is examined in two series of collected works: Anderson et al. (1984) report a series of studies on variables affecting the quality of comprehension instruction offered in basal reading materials; and Duffy et al. (1984) report a series of studies on variables affecting the quality of comprehension in textbooks used in various subject areas. Another current issue, the presentation of sequences of skills in many reading materials at the expense of attention to the process of reading, is considered by another group of researchers (Durkin, 1981; Armbruster and Gudbrandsen, 1986; Green -Wilder and Kingston, 1986; Winograd and Greenlee, 1986; and Hoffman, 1987).

Although several Australian researchers have investigated various effects of using reading materials in schools, only Unsworth (1981: item 140) and Pirozzo (1982: item 139) have examined the relationship between reading comprehension and reading materials. On the other hand, Cairney (1988: item 136) has investigated the effects of reading materials upon students' attitudes. Other articles annotated in this section examine the changes in the practice of reading instruction occurring as a consequence of the shift of influence from information transfer theories to interactive theories (Wilson, 1982: item 142; Bradley, 1984: item 135). One noteworthy observation can be drawn from the Australian research annotated in this section. It contains a

relatively high proportion of articles, notably those by Bradley and Unsworth, which deal with the application of materials in teaching and learning activities instead of considering content.

2.2.4 Science

The curriculum reform movement in the United States during the 1960s saw the development of several major science projects, including the Physical Science Study Course (PSSC), Chemical Study, and Biological Sciences Curriculum Study (BSCS). The instructional materials developed by teams in each project embodied enquiry approaches to the learning of science. Woodward et al. identified that most researchers agree that current science textbooks do not reflect this philosophy of science teaching. A number of researchers have reported studies on the attributes of content in science textbooks (Carrick, 1977; Lowery and Leonard, 1978; Lehrman, 1982; Stuart, 1982; Newton, 1983; Yager, 1983; and Curtis and Reigeluth, 1984). Another group of researchers have expressed concerns about the superficiality of science textbooks with their emphases upon memorisation and lack of attention to higher order processes (Babikian, 1975; Barrass, 1984; Denny, 1983; Elliott and Nagel, 1987; Hurd et al., 1980; Gabel, 1983; Pauling, 1983; and Pratt, 1985). Several other researchers have discussed the cursory treatment given to controversial issues in science textbooks (Krupka and Vener, 1982; Rosenhal, 1984).

Similar processes were adopted in the Australian Science Education Project (ASEP), and instructional materials were developed that treat science as an integrated study and apply enquiry approaches. The commitment given in ASEP to the development and evaluation of instructional materials may account for the more extensive research annotated in this section than in the other sections on subject matter (Clarke, 1975: item 144; Lowe, 1989, item 147). On closer examination, it is evident that this research is the productive work of only a few authors. The articles by De Berg, Lynch, Prosser and Strube report research methodologies, the findings of studies or discuss the attributes of the content of science textbooks.

2.2.5 Social Studies

The social studies have been fraught by the need to reconcile two objectives: those of 'citizenship' and 'scholarship'. Although the social studies arose from citizenship education in the nineteenth century, its curriculum developed as an outcome of the Commission on the

Reorganisation of Secondary Education in 1916. Arising during the curriculum reform movement of the 1960s, the 'new social studies' reinforced the move towards scholarship by including additional social science disciplines within the content of social studies. This development was challenged, however, by a shift to citizenship education during the late 1960s and 1970s through the inclusion of content that centred on societal problems.

Woodward et al. identified that most of the extensive American research on social studies textbooks is concerned with the adequacy of content coverage. A number of researchers have traced the changes in subject matter on various topics in social studies textbooks that reflect these shifts (Reynolds, 1952; Janis, 1972; Jackson, 1976; Fitzgerald, 1979; Danilov and Sharifzhanov, 1981; Fleming, 1981; Anderson and Beck, 1983; Agostino and Barone, 1985; and Garcia and Tanner, 1985). They also mention several noteworthy exceptions to this pattern; Reyes (1986) considered standards and treatment of critical thinking in social studies textbooks; and English (1986) considered the calibre of writing in social studies textbooks.

Markedly fewer articles by Australian authors on social studies are annotated in this bibliography. Again, they are concerned exclusively with the content of social studies materials. None traces the changes in subject matter within instructional materials.

2.3 Ideology and Controversy

2.3.1 Ideology and Instructional Materials

Woodward et al. note the importance of philosophical and ideological emphases that authors give to the subject matter of textbooks because of the evident dependence of teachers and students upon textbooks. In this section, they include articles on reported research investigating how subject matter is selected and presented in order to transmit national, regional and group values. Most of the articles are concerned with two issues: how authors have influenced political socialisation (Belok, 1981; Fratczak, 1981; and Haavelsrud, 1980); and how the content of basal reading materials transmit cultural values (DeCharms and Moeller, 1962; Zimet, 1969; Hurst, 1979; and Freebody and Baker, 1985).

Several articles by Australian authors deal with the effects of ideological issues upon the content of instructional materials. Three of

the articles refer to the controversy surrounding the politicisation of Japanese textbooks in 1982 (Seddon, 1983: item 166; Williamson-Fien, 1985: item 168; and Seddon, 1987, item 167).

2.3.2 Controversy and Censorship

Censorship of instructional materials used in American schools arose during the aftermath of the American Civil War. Various regional interest groups were successful in influencing publishers to review accounts of that conflict in textbooks. Thereafter, the Daughters of the American Revolution, the Ku Klux Klan and the Knights of Columbus objected to various references in textbooks. In 1928, the Federal Trade Commission identified that several large corporations had attempted to alter the depiction of their organisations in textbooks. In 1939, a coalition of conservative interest groups attacked a series of history textbooks as Communist propaganda and similar protests increased in frequency during the McCarthy Era. As previously mentioned, the civil rights movement influenced the content of textbooks markedly during the 1960s. A reaction to this development came from various groups, often labelled collectively as the 'New Right'. Notable and long-running incidents by these groups include the influence of Mel and Norma Gabler through their agency, Educational Research Analysts, upon the Texas State Textbook Committee for a decade until challenged with legislative action by an anti-censorship group, the People for the American Way in 1984, and the attempt by various groups to censor textbooks in the Kanawha County school district in West Virginia between 1974 and 1976.

The reported research on controversy and censorship is extensive. Woodward et al. identified three main categories among this research. The first group describes attempts at censorship and surveys into the extent of censorship (Hefley, 1979; Stern, 1979; Kamhi, 1982; Jenkinson, 1983a; Schipper, 1983; Watras, 1983; Fitzgerald, 1984; and Vitz, 1986). The second group describes court cases, explains legal implications and presents procedures for dealing with complaints about materials (Arons, 1981; Kelly and Gross, 1981; Jenkinson, 1983b; and Rowell, 1987). The third group discusses issues arising from judgments on what is appropriate knowledge for children of different ages, the responsibilities of parents in determining what sorts of knowledge their children should be exposed to, and the role of teachers and educational policy-makers in intervening in demands from various groups (Blume, 1982; Burress and Jenkins, 1982; McGraw, 1982; Nocera, 1982; Donelson, 1983; and Wynne, 1985).

The reported research suggests that protests over controversial issues in instructional materials in Australia are a recent phenomenon. The one notable case reported in research, relates to the censorship of instructional materials from the social studies programs, Man: A Course of Study (MACOS) and Social Education Materials Project (SEMP), in Queensland in 1978. The protesting groups involved in the controversy were similar to American groups of the New Right. Each of the three categories of research is represented in the articles by Australian researchers annotated in this bibliography. Most of the articles, however, represent the first group (Smith and Knight, 1978: item 178; Duhs, 1979: item 173; O'Donnell, 1980: item 175; Smith and Knight, 1981: item 179; and Singh, 1987: item 177). Both the second and third groups are each represented by only one article: Anderson (1978: item 169) presents guidelines for dealing with controversial issues; and Dellit (1986: item 172) considers the role of the teacher in censoring controversial materials.

2.3.3 Evolution Theory and Creationism

Although the dispute between evolution and creation reflects one aspect of censorship, evolutionists and creationists are recognisable protagonists whereas others involved in censorship protests come from diverse backgrounds. The teaching of evolution in American schools became a controversial issue following a campaign mounted by the World Christian Fundamentals formed in 1919. This campaign led to laws being enacted in Oklahoma, Florida and Tennessee making the teaching of evolution a criminal offense. This led to the celebrated trial of John T. Scopes at Dayton, Tennessee in July 1925, which attracted national attention because of both the appearance of William Jennings Bryant and Clarence Darrow and the death of the former soon afterwards. The conviction of Scopes was seen as a victory for the creationists, and anti-evolution laws were passed in Mississippi in 1926, Arkansas in 1928 and Texas in 1929. In spite of these successes, interdenominational fundamentalism lost its drive during the 1930s. A renaissance in creationism occurred with the foundation of the Creation Research Society in 1963, which, together with the Bible -Science Association founded in 1964, were the predominant creationist organisations active during the 1960s. In 1970, members of the former founded the Creation Science Research Center in California, which was successful during the 1970s in lobbying state legislatures in Tennessee and Arkansas to enact 'equal time' legislation. Evolutionists were able to mount campaigns in the 1980s, however,

that reversed these successes by the creationists.

These events were significant for the treatment of evolution in science textbooks in the United States. Evolution was not treated extensively until the publication of textbooks as part of the Biological Sciences Curriculum Study (BCSC), which attracted protests from creationists in Texas in 1964. There is considerable evidence that recent campaigns by creationists have influenced many publishers into restricting the coverage of evolution. The reported research annotated by Woodward et al. in this section can be divided into two groups. The first group describes attempts by creationists to censor science textbooks (Maeroff, 1982; Wade, 1972; Moore, 1983; Lewin, 1984; and Moyer, 1985). The second group traces the treatment of evolution or reports content analyses of its treatment in science textbooks (Christy, 1937; Grabiner and Miller, 1974; Skoog, 1979; Skoog, 1984; Hellman, 1985; Rosenthal, 1985; and Woodward and Elliott, 1987).

In 1975, members of the Institute of Creation Research, formed in 1972 from a schism within the Creation Science Research Center, visited Australia. This led to the development of a creationist movement in Australia which was formally established as the Creation Science Foundation at Brisbane in 1980. Of the two articles identified during the search, only Sperring (1986: item 181) provides an account of the development of creationism in Australia.

4. THE COMMON CURRICULUM FRAMEWORK FOR AUSTRALIAN EDUCATION: THE IMPLICATIONS OF RESEARCH ON INSTRUCTIONAL MATERIALS

The only proposal to develop a national system of evaluative information on instructional materials was initiated by the Australian Council for Educational Research (ACER) during the 1970s (Jeffery, 1976: item 085). This endeavour did not eventuate because this activity was to be encompassed within the mission of the newly founded Curriculum Development Centre (CDC).

Founded in June 1973 by the Australian Commonwealth, the Curriculum Development Centre was allocated the functions of devising and developing school curricula and curriculum materials, undertaking, promoting and assisting and disseminating information relating to school curricula and curriculum materials, and arranging for the printing and publication of school curricula and curriculum materials. During the period between 1973 and 1981, a greater part of the work of the Curriculum Development Centre was involved in coordinating projects such as the Australian Science Education Project (ASEP) and Social Education Materials Project (SEMP). Although the search identified valuable research undertaken on the diffusion and adoption of instructional materials developed in these projects, the Curriculum Development Centre did not attempt to develop a comprehensive system of evaluative data on instructional materials.

The success of this first period was muted during the 1980s because of political constraints and funding restrictions which forced the Curriculum Development Centre to close between 1981 and 1984. As one of the four divisions of the new Commonwealth Schools Commission, the new Curriculum Development Centre was required to collaborate with state education departments and other educational agencies on curriculum projects. This led to collaboration with the Australian Schools Catalogue Information Service (ASCIS), formed in 1984 to design a computer-based system for cataloguing information on instructional materials held in the collections of school libraries. This collaboration included the establishment in 1987 of a National Software Coordination Unit (NSCU) within the Curriculum Development Centre, for the purpose of collecting, synthesising and disseminating evaluative information on computer courseware and computer-related instructional materials.

An agenda for reform of the Australian educational system was a major priority of the Labor government during the latter part of the 1980s. A conference of directors-general of state education departments examined how national and state educational authorities could collaborate to the best effect through the Australian Education Council (AEC) with the directors of curriculum forming the main working group. The implications of these changes were supported by the Minister for Employment, Education and Training in his statement of May 1988, inviting cooperation from the states towards a national effort to strengthen the capacity of Australian schools (Dawkins, 1988). This statement presented a rationale for developing a curriculum framework for Australian schools to include common objectives which also accommodate specific content to meet particular regional needs. In agreeing to this proposal, the Australian Education Council (1989) proposed seven initiatives: a set of ten national goals for schooling; publication of an annual national report on schooling; national collaboration in curriculum development; the establishment of a new national agency, the Curriculum Corporation, through the amalgamation of the Curriculum Development Centre and the Australian Schools Catalogue Information Service; use of a common handwriting style in Australian schools; establishment of a common age for school entry; and development of strategies to improve teacher education.

In July 1986, the Australian Education Council adopted the strategy of identifying and drawing up lists of activities and materials, either existing or being undertaken by educational authorities in eight curriculum areas: mathematics; science; technology; English and literacy; study of society; health, physical education and physical development; the arts; and languages other than English. Each of the state and territorial departments of education was given responsibility for a particular curriculum area. This work was undertaken between 1988 and 1990, and published by the Curriculum Corporation (1991). The intent of this report is to document information on work that will form the framework for the national curriculum.

The information contained in this report is organised under each curriculum area according to types of document, whether policy statements, syllabuses, guides, professional materials and instructional materials. A prospective activity in curriculum collaboration is likely to involve the collection, synthesis and dissemination of evaluative information on these products. The intention is now to examine how the conclusions to the review of

research on instructional materials might inform decision-making on the selected aspects relating to instructional materials.

Review of Research on Instructional Materials: Findings and Recommendations

It is apparent that development and implementation of instructional materials, their relationship to teaching and learning and educational policy making will form a significant element of the common curriculum framework for Australian schools. The review indicates a variety of omissions and limitations in research information on various aspects of instructional materials within the Australian setting. Therefore, it is essential for decision-makers to draw upon appropriate research available from foreign sources.

A comparison between the Australian research and the American research indicates various deficiencies in the former in each aspect investigated. The findings of this research for each aspect are reported below, followed by recommendations.

(a) Use and Curriculum Role: Several significant American research studies have focused upon the curriculum role of textbooks, identifying that both teachers and students rely upon them extensively. Australian research studies have been directed to describing patterns of use of instructional materials, rather than determining their inherent role within the curriculum.

It is recommended that research is undertaken on the extent to which Australian teachers and students rely upon instructional materials so that issues relating to their quality and effects upon teaching and learning can be better understood.

(b) Selection: Current American research has identified various inequities in the mandated practices that various educational authorities use to select and adopt instructional materials. The Australian research underscores the inadequate means used to select instructional materials, and supports the view that both teachers and educational authorities have a poor appreciation of what is an organised and valid process for selecting instructional materials.

It is recommended that research is undertaken to determine more valid and reliable decision-making processes for selecting instructional materials in Australian educational settings. Such research should take

account of the findings of American research in this aspect.

(c) The Publishing Industry: Very little research has been reported on the commercial publishing industry in either the United States or Australia. Whilst American research on the design, and learner verification and revision of instructional materials is more extensive, little Australian research into these aspects has been reported.

It is recommended that research is undertaken into the functions of the commercial publishing industry in Australia, and to reporting research on the field-testing of instructional materials.

(d) Innovation and Reform: The survey of Australian research about the products of reform and innovation identified a marked decrease in such research after 1980. The extant research is restricted to studies undertaken either on the processes involved in developing, disseminating and implementing instructional materials or on surveying the subsequent use of these products. In contrast to the American setting, there is a lack of research that provides time-series data indicating changes in the extent to which the products of these reform efforts are used.

It is recommended that research is undertaken in two areas: providing time-series data on the use of instructional materials produced in the ASEP and SEMP; and providing studies on the use of instructional materials produced in current efforts at curriculum development coordinated by the Curriculum Corporation.

(e) General References: Comparatively few references by Australian authors were identified in each of three areas: research relating to the analysis of instructional materials; research relating to the collection, synthesis and dissemination of information on instructional materials; and research examining the application of evaluative procedures to instructional materials.

It is recommended that research is undertaken in each of these areas, taking account of past and present research by American authors.

(f) Readability: Research by American authors has recognised that readability formulas are not valid measures of all aspects of text readability, and current research is directed towards formulating more valid measures, such as considerateness. There is no evidence that research by Australian authors has taken account of this most recent

development.

It is recommended that current developments into research on text readability are taken into account by Australian researchers.

(g) Treatment of Minorities and Women: It is evident that research studies by American authors into racist and sexist biases in instructional materials is extensive. Comparatively few research studies have been reported by Australian authors.

It is recommended that systematic research studies are undertaken on racist and sexist biases within instructional materials used in Australian schools.

(h) Subject Matter Content Coverage: Research studies reported by American authors on content coverage in each of five subject areas, except language arts, are extensive. Very few research studies by Australian authors have been undertaken into content coverage in these subject areas, except for science.

It is recommended that systematic research is undertaken on the content coverage within instructional materials used in specific subject areas.

(i) Ideology and Instructional Materials: Very little research has been reported on the philosophical and ideological emphases that authors give to the subject matter in instructional materials in either the United States or Australia. It is evident that Australian researchers have not investigated how textbook authors influence political socialisation.

It is recommended that research is undertaken into the philosophical and ideological emphases given by authors of instructional materials used in Australian schools.

(j) Controversy and Censorship: Most American research reported on controversy and censorship has either described censorship issues or investigated legal implications, whilst research on assigning responsibility for censorship is not extensive. A similar conclusion can be stated about the elements of Australian research on controversial issues in instructional materials and censorship.

It is recommended that research is undertaken on appropriate

knowledge for children of different ages, the responsibilities of parents in determining what sorts of knowledge their children should be exposed to, and the role of teachers and educational policy-makers in intervening in demands from various groups.

(k) Evolution Theory and Creationism: Research studies by American authors have reported evidence that creationists have influenced the coverage of evolution in textbooks. There is no evidence of comparable research reported by Australian authors.

It is recommended that research is undertaken to substantiate the representation of evolution in science materials used in Australian schools.

LIST OF PERIODICALS

Aboriginal Child at School
The Editor, Department of Education, University of Queensland, St Lucia, Qld 4067

ACES Review
Australian Council for Educational Standards, PO Box 118, Bentleigh, Vic 3204

Agora
History Teachers Association of Victoria, 402 Smith Street, Collingwood, Vic 3066

Australasian College Libraries
Library, South Australian College of Advanced Education, Holbrooks Road, Underdale, SA 5032

The Australian Administrator
The Editor, School of Education, Deakin University, Waurn Ponds, Vic 3217

Australian Journal of Adult Education
Australian Association of Adult Education, GPO Box 1346, Canberra, ACT 2601

Australian Journal of Early Childhood
Australian Early Childhood Association, PO Box 105, Watson, ACT 2602

Australian Journal of Education
Australian Council for Educational Research, PO Box 210, Hawthorn, Victoria 3122

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The Editor, Professional Development Centre, University of New South Wales, PO Box 1, Kensington, NSW 2033

Australian Journal of Reading
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Australian Remedial Education Association, Australian Special Book Services, 319 High Street, Kew, Vic 3101

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TAFE National Centre for Research and Development, 252 Kensington Road, Leabrook, SA 5068

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Australian Library and Information Association, 376 Jones Street, Ultimo, NSW 2007

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Australian Association of Mathematics Teachers, 20 Kookaburra Street, Kenmore Hills, Qld 4069

Australian School Librarian
School Library Association of Victoria, PO Box 280, East Melbourne, Vic 3002

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Australian Science Teachers Association, Science and Mathematics Education Centre, Curtin University of Technology, GPO Box U1987, Perth, WA 6001

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The Editor, PO Box 415, Carlton South, Vic 3053

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National Council for Educational Technology, Sir William Lyons Road, University Science Park, Coventry CV4 7EZ, UK

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Division of Education, University of Sheffield, Sheffield S10 2TN, UK

Category B
Alternative English Cooperative, PO Box 229, Magill, SA 5072

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Com 3
Computer Education Group of Victoria, PO Box 1061, Richmond North, Victoria 3121

Curriculum and Teaching
James Nicholas Publishers, PO Box 244, Albert Park, Vic 3206

Curriculum Development in Australian Schools
Curriculum Development Centre, PO Box 34, Woden, ACT 2606

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Ontario Institute for Studies in Education, 252 Bloor Street W, Toronto, Ontario M5S 1V6, Canada

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Australian Curriculum Studies Association, School of Education, Murdoch University, Murdoch, WA 6150

Discourse
Department of Education, University of Queensland, St. Lucia, Qld 4067

Distance Education
Australian and South Pacific External Studies Association, Darling Downs Institute Press, PO Darling Heights, Toowoomba, Qld 4350

Early Years
ACT Department of Education, Macarthur House, PO Box 20, Civic Square, ACT 2608

Education (NSW)
New South Wales Teachers Federation, 300 Sussex Street, Sydney, NSW 2000

Education (WA)
Ministry of Education, Western Australia, 151 Royal Street, East Perth, WA 6000

Education and Society
James Nicholas Publishers, PO Box 244, Albert Park, Vic 3206

Education Links
Education Links Collective, 37 Cavendish Street, Stanmore, NSW 2048

Education News
The Editor, PO Box 826, Woden, ACT 2606

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The Editor, Department of Education, University of Western Australia, Nedlands, WA 6009

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Australian Association for the Teaching of English, PO Box 203, Norwood, SA 5067

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Victorian Association of Social Studies, PO Box 91, Balaclava, Vic 3183

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Sydney College of Advanced Education, PO Box 375, Waterloo, NSW 2017

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Australian Geography Teachers Association, School of Geography, Queensland University of Technology, Locked Mail Bag No. 2, Red Hill, Qld 4059

Gifted Education International
AB Academic Publishers, PO Box 97, Berkhamsted, Herts HP4 2PX, UK

Harvard Educational Review
Gutman Library Suite 349, 6 Appian Way, Cambridge, MA 02138,USA

Higher Education Research and Development
Centre for Learning and Teaching, The University of Technology Sydney, PO Box 123, Broadway, NSW 2007

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Australian and New Zealand History of Education Society, Faculty of Education, Monash University, Clayton, Vic 3168

The History Teacher
Queensland History Teachers Association, Brisbane Education Centre, PO Box 84, Red Hill, Qld 4004

Idiom
Victorian Association for the Teaching of English, PO Box 265, Carlton South, Vic 3053

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Institute of Public Affairs, 83 William Street, Melbourne, Vic 3000

International Journal of Science Education
Department of Education, University of Keele, Keele, Staffordshire ST5 5BG, UK

Journal of Curriculum Studies
Department of Curriculum and Instruction, University of Illinois at Urbana-Champaign, 341 Armory Building, 505 East Armory Avenue, Champaign, IL 61801, USA

The Journal of Educational Administration
University of New England, Armidale, NSW 2351

Journal of Educational Research
Heldref Publications, 4000 Albemarle Street NW, Washington, DC 20016, USA

Journal of Intercultural Studies
The Editor, Centre for Migrant Studies, Monash University, Clayton, Vic 3168

Journal of Reading
International Reading Association, PO Box 8139, Newark, DE 19714, USA

Journal of Research in Science Teaching
National Association for Research in Science Teaching, 223-E Peabody, Louisiana State University, Baton Rouge, LA 70803, USA

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School Library Association of Queensland, PO Box 997, Toowong, Qld 4066

Journal of Science and Mathematics Education in Southeast Asia
SEAMIO Regional Centre for Education in Science and Mathematics, Glugor, Penang, Malaysia

Lab Talk
Science Teachers Association of Victoria, Clunies Ross House, 191 Royal Parade, Parkville, Vic 3052

Learning Exchange
432 Waverley Road, East Malvern, Vic 3145

Modern Teaching
Modern Teaching Methods Association, PO Box 243, Croydon, Vic 3136

Multicultural Education Newsletter
The Editor, Languages and Multicultural Centre, 139 Grote Street, Adelaide, SA 5000

Narration
Victorian Commercial Teachers Association, 33-37 Hotham Street, Collingwood, Vic 3066

New Education
James Nicholas Publisher, PO Box 244, Albert Park, Vic 3206

Orana
The Editor, 9 Lawley Road, Lesmurdie, WA 6076

Physics Education
Institute of Physics Publishing Ltd., Techno House, Redcliffe Way, Bristol BS1 6NX, UK

Pivot
Education Department of South Australia, GPO Box 1152, Adelaide, SA 5001

Polycom
Ministry of Education, Victoria, GPO Box 4367, Melbourne, Vic 3001

Primary Education
The Editor, 25-27 Huntingdale Road, Burwood, Vic 3125

The Primary Journal
Studies Directorate, New South Wales Department of Education, GPO Box 33, Sydney, NSW 2001

Prospect
National Centre for English Language and Teaching Research, Macquarie University, NSW 2109

Queensland Science Teacher
Science Teachers Association of Queensland, Brisbane Education Centre, PO Box 84, Spring Hill, Qld 4004

Quest
Production and Publishing Services Branch, Queensland Department of Education, PO Box 33, North Quay, Qld 4000

Radical Education Dossier
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Reading Around
Australian Reading Association, PO Box 78, Carlton, Vic 3053

Reading Education
Mitchell College of Advanced Education, Bathurst, NSW 2795

The Reading Teacher
International Reading Association, PO Box 8139, Newark, DE 19714, USA

Review
School Libraries Branch, Education Department of South Australia, GPO Box 1152, Adelaide, SA 5001

Review Bulletin
The Editor, Statewide School Library Support Centre, 67 High Street, Prahan, Vic 3181

Rhombus
Mathematical Association of Western Australia, University of Western Australia, Nedlands,

WA 6009

SASTA Journal
South Australian Science Teachers Association, 163A Greenhill Road, Parkside, SA 5063

School Library Bulletin
Library and Education History Service, Ministry of Education, Victoria, GPO Box 4367, Melbourne,Vic 3001

Science Education
John Wiley & Sons, 605 Third Avenue, New York, NY 10158, USA

Scios
Science Teachers Association of Western Australia, PO Box 991, West Perth, WA 6005

Secondary Library Newsletter
Catholic Education Office, PO Box 217, Leichhardt, NSW 2040

Set
Australian Council for Educational Research, PO Box 210, Hawthorn, Vic 3122; New Zealand Council for Educational Research, PO Box 3237, Wellington, NZ

Social Education
National Council for the Social Studies, 3501 Newark Street NW, Washington, DC 20016, USA

The Social Studies
Heldref Publications, 4000 Albemarle Street NW, Washington, DC 20016, USA

South Australian Journal of Educational Research
Education Department of South Australia, GPO Box 1152, Adelaide, SA 5001

South Coast Library Links
Professional Services Centre, New South Wales Department of Education, Vereker Street, Mt Ouseley, NSW 2519

Studies in Educational Evaluation
Pergamon Journals, Maxwell House, Fairview Park, Elmsford, NY 10523. USA

Study of Society
Victorian Advisory Committee on the Teaching of the Social Studies, PO Box 91, Balaclava, Vic 3183

Teachers College Record
Teachers College, Columbia University, 525 West 120 Street, New York, NY 10027, USA

Teaching of English
English Teachers Association of New South Wales, PO Box 187, Rozelle, NSW 2039

Unicorn
Australian College of Education, PO Box 323, Curtin, ACT 2605

VAT

Victorian Affiliated Teachers Federation, PO Box 200, Glen Waverley, Vic 3150

Wikaru
Institute of Applied Aboriginal Studies, Western Australia College of Advanced Education, Mt Lawley Campus, PO Box 66, Mt Lawley, WA 6050

1. PRODUCERS AND CONSUMERS

1.1 Instructional Materials and School Programs

1.1.1 Use and Curriculum Role

001 Clyde, A.
'How students use distance teaching materials: an institutional study'
Distance Education, 4: 1, 4-26 (1983)
Reports a study, in which diaries were used by a sample of students, to identify ways they used instructional materials, especially in relation to use of time, range of materials consulted, self-assessment activities undertaken, and the sequence in which materials were studied.

002 Codrington, S.
'Textbooks: class sets vs. set texts'
Geographical Education, 5: , 5-7 (1985)
Presents the views of three secondary teachers regarding the use of textbooks in geography instruction.

003 Cornbleth, C.
'Old versus new curriculum materials use in science and social studies'
Curriculum Perspectives, 2: 2, 25-33 (1982)
Reports a study of the proportion of instructional time that instructional materials of varying media, analysed by the Annehurst Curriculum Classification System, were used in 'old' and 'new' science and social studies programs in two elementary schools in the United States.

004 Education News
'ESL materials survey'
Education News, 17: 9, 40-41 (1981)
Reports the findings of a survey of teachers and consultants on the value and appropriateness of instructional materials produced by the Language Teaching Branch of the Commonwealth Department of Education for English as a second language.

005 Gunter, A.

'The politics of textbooks: a philosophy sketched, and some implications applied to junior secondary texts'
Idiom, 15: 2, 11-21 (1980)
Describes a model for using textbooks within an educational program, and applies it specifically to several English language textbooks and reading materials.

006 Gunter, A.
'Learning materials and multicultural education'
Polycom, 31, 9-11 (1982)
no review

007 Hannon, S.
'ESL learning and teaching materials: an investigation of their use in AMES, SA'
Prospect, 1: 3, 86-100 (1986)
Reports a study conducted by the Adult Migrant Education Services in Adelaide, South Australia, using a two-stage research design in which loans of instructional materials and professional materials from a resource centre and the copying of materials for classroom use at two other sites were surveyed. The findings indicated that materials for listening comprehension and those produced in Australia were most used.

008 Kennedy, K.J.
'Providing materials does not guarantee their use'
Curriculum Development in Australian Schools, 1, 11-13 (1985)
Describes a survey of principals, teacher-librarians and teachers at three Western Australian schools on their use of a curriculum material, *Seventeen Australian Families*, produced by the Curriculum Development Centre and Qantas.

009 Lumb, P .
'Using multicultural education materials'
Polycom, 27, 2-7 (1981)
no review

010 Marsh, C.J.
'Teachers' knowledge and use of social studies curriculum materials in public elementary schools'
Journal of Educational Research, 77: 4, 237-243 (1984)
Reports a study, using a three-stage research design of case studies and representative interviews to formulate items for a

final questionnaire, to survey a sample of teachers' perceptions in Western Australian primary schools on processes used to select, distribute and use curriculum materials. The findings indicated that they were not actively involved in these processes.

011 Marsh, C.J., Willis, S., Newby, J.H., Deschamp, P., and Davis, B.P.
'Teachers' perceptions about the selection, distribution and use of social studies and mathematics curriculum materials within a state education system'
Journal of Curriculum Studies, 17: 1, 49-61 (1985)
Reports a study, using a three-stage research design of case studies and representative interviews to formulate items for a final questionnaire, to survey a sample of teachers' perceptions in Western Australian primary schools on processes used to select, distribute and use curriculum materials. The findings indicated that they were not actively involved in these processes.

012 Mitchell, J.T. and Traill, R.D.
'Making curriculum implementation a reality'
Curriculum Perspectives, 6: 1, 23-27 (1986)
Describes the development of a curriculum material, *Electing Australia's Federal Parliament*, by the Australian Electoral Commission and the Curriculum Development Centre. Also reports the findings of a study to evaluate the material both by content analysis using the Sussex Scheme and the effectiveness of its implementation by surveying its use in high schools, and using curriculum consultants to revise the material. Presents a model for developing and implementing curriculum materials.

013 Robottom, I.
'Investigating the National Estate: some early reactions'
Ethos, 11: 1, 12-17 (1981)
no review

014 Russell, A.L.
'How media materials are used in university instruction: reports of selected university faculty members'
Australian Journal of Educational Technology, 1: 1, 47-58
no review

015 Tulip, D.F.

'Survey of science curriculum materials used in year 8, 9 and 10 throughout Queensland in 1979-1980'
Queensland Science Teacher, 1-5 (1980)
no review

016 Wilson, L.
'City kids: a multilingual experience-based program in Australia'
The Reading Teacher, 32, 674-676 (1979)
Discusses the use of a series of basal reading materials, published in English and several community languages, at a primary school in Victoria.

1.1.2 Selection

017 Borthwick, J.
'The selection of textbooks: source books and course books for the English classroom'
English in Australia, 61, 3-21 (1982)
Examines decision-making issues, including whether textbooks should be adopted and textbook selection based upon criteria of practicality and pedagogy, that face individual teachers and recommends that selection of a textbook is based upon three criteria: its ideological base; its content; and its role in classroom transactions.

018 Brimble, R.A.
'A guide to selecting reading materials'
Australian Journal of Reading, 4: 4, 173-178 (1981)
Outlines a set of criteria for selecting reading materials

019 Brimble, R.A.
'Who selects reading materials?'
Australian Journal of Reading, 4: 4, 199-203 (1981)
Reports the findings of a survey involving a sample of teachers' attitudes towards consulting various groups in the selection of reading materials, and on the appropriateness of applying particular selection criteria.

020 Comber, B.
'Self-selecting and reading with purpose'
Reading Around, 9: 4, 91-94 (1981)
Suggests student selection of reading materials is compatible with improving students' attainments in reading and skills in

selecting materials.

021 Crewe, J.
'Selecting curriculum materials K-12'
Orana, 17: 4, 153-157 (1981)
Presents a holistic approach for selecting instructional materials of varying media, and recommends procedures for selecting and managing collections of instructional materials in school libraries.

022 Derrick, H.
Choosing books for children'
Early Years, 2: 1, 12-16 (1977)
Suggests that selection by parents of reading materials be based upon criteria, such as physical attributes and story plots, that appeal most to young children.

023 Fincher, B.
'Selection of materials in the school setting'
Australian School Librarian, 19: 3, 85-86, 99 (1982)
Reports a study of the use of selection policy statements at 69 school libraries in Victoria.

024 Fish, G.
'Specifying curriculum materials'
Lab Talk, 21: 6, 2-7 (1977)
Suggests that the selection of curriculum materials should be guided by the need to meet the aims, learning strategies and content of the program, and to take account of student development.

025 Giddings, G.
'Science textbooks in W.A.: what's happening?'
Scios, 33: 3, 17-26 (1988)
Reports a study in which 140 science teachers at 80 secondary schools in Western Australia were surveyed on their use of professional materials for preparation, the textbooks they selected, the criteria they used for selection and the responsibility for selection decisions.

026 Gunter, A.
'Mixed ability classes - choosing and organising learning materials'

Australian Journal of Remedial Education, 11: 3, 18-28 (1979)
Discusses the case for taking account of transactional variables when selecting instructional materials, and recommends that selection of an instructional material is based upon three criteria: its fit to an instructional program; the sequence and scope of its contents; and its match to instructional objectives.

027 Gunter, A.
'Choosing and organising learning materials'
Study of Society, 10: 2, 4-5 (1979)
Presents a rationale for developing, selecting and modifying instructional materials, and discusses the implications of five variables: the needs of students; the learning environment; teaching style; continuous modification of materials; and evaluation of materials.

028 Gunter, A.
'Transactions with textbooks or person to person'
Idiom, 16: 4, 14-25 (1981)
Explicates a set of guidelines for selecting textbooks that will lead to the engagement of learners, and applies the guidelines to several English language textbooks.

029 Gunter, A.
'Guidelines for choosing books and course materials'
English in Australia, 65, 3-8 (1983)
Outlines criteria by which to select both reading materials and textbooks for language arts programs.

030 Hayes, T.
'Scenario three: suggested guidelines for choosing'
Idiom, 20: 2, 6-7 (1985)
Recommends that selection of reading materials encompasses a set of guidelines.

031 Hemmings, B. and Battersby, D.
'Textbook selection: evaluative criteria'
Higher Education Research and Development, 8: 1, 69-8 (1989)
Describes an instrument, the Textbook Selection Checklist, developed from an empirical base, and reports its trialling through assessment of the relative merits of introductory and educational psychology textbooks for higher education.

032 Hoffman, L. and Kenworthy, C.
'Using reader-choice of books to promote reading: West Australian Young Readers' Book Award'
Australian Journal of Reading, 4: 2, 96-100 (1981)
Describes the procedures whereby students' attitudes were used to judge reading materials entered for the West Australian Young Readers' Book Award.

033 Hyland, L.
'Selecting (fiction) books for Aboriginal children'
VAT, 4: 12, 22-23, 25 (1979); *Polycom*, 25, 24-27 (1980)
Discusses a process and criteria to be used for selecting reading materials for Aboriginals, and presents examples of materials that are recommended and not recommended.

034 Jaunay, G.R.
'Selecting books for Aboriginal children'
Aboriginal Child at School, 6: 5, 30-32 (1978)
Discusses variables affecting the selection of reading materials for Aboriginal children.

035 Kirk, J.
'Children's book choices: the influence of format"
Orana, 22: 4, 180-184 (1986)
Reports a study of the effects that the physical attributes of reading materials have upon their selection by a sample of third through sixth graders in New South Wales. Findings identified that physical attributes, in particular cover illustrations, were used by most subjects for selections.

036 Langrehr, J.
'How do you select curriculum materials?'
Curriculum Perspectives, 3: 1, 31-36 (1983)
Describes the Annehurst Curriculum Classification System, used to classify curriculum materials in terms of learner aptitudes such as intelligence, experience, motivation, emotion -personality, creativity, verbal expression, and visual, aural and motor perception. Recommends that these aptitudes are taken into account in the selection process.

037 Laslett, A., Rogers, T. and Temple, T.
'Who owns the books? Developing a book selection policy for an English faculty'

Australian Journal of Reading, 7: 4, 215-222 (1984)
Describes a process for language arts teachers to select instructional materials by formulating a selection policy, applying specific selection criteria, researching information on submitted materials, and using a review committee.

038 Marsh, C.J.
'Primary school principals: intentions and realities in the selection of curriculum materials'
The Australian Administrator, 4: 3, -4 (1983)
Reports a study of the attitudes and roles of a sample of principals in Western Australian primary schools on the dissemination and selection of curriculum materials for social studies and mathematics.

039 McVitty, W.
'Children's literature in the classroom'
Primary Education, 14: 3, 5-7 (1983)
Discusses the influence of variables that affect the selection of reading materials for young children.

040 Nimon, M.
'The selection of SF for a school library'
Children's Libraries Newsletter, 12: 3, 88-91 (1976)
Discusses a range of issues relating to the quality and selection of reading materials on science fiction.

041 Polack, M.
'Scenario two: the search for the perfect text'
Idiom, 20: 2, 4-5 (1985)
Discusses key issues involved in selecting textbooks for language arts programs.

042 Smith, J.
'Selecting literary texts in the multicultural classroom: some considerations'
Teaching of English, 41, 3-13 (1981)
Describes a range of variables, including the degree of English language acquisition, literary images, cultural relevance and biases, affecting the selection of reading materials for students of non-English speaking backgrounds.

043 Somerville, D.B.

'Criteria for selecting an adequate science text for use in junior secondary classes'
SASTA Journal, 872, 42-44 (1987)
Outlines three sets of criteria, those of physical appearance, layout and content, for selecting textbooks on science.

1.2 Production and Marketing of Instructional Materials

1.2.1 The Publishing Industry

044 Apple, M.W.
'The political economy of text publishing'
Curriculum and Teaching, 1: 1 & 2, 55-67 (1986)
Argues that the profit-seeking nature of the publishing industry leads to a policy of textbook management, thereby resulting in the transmission of standardised cultural knowledge.

045 Birch, A.
'A new perspective on science'
Education News, 18: 10, 28-29 (1984)
Argues that there is no shortage of science textbooks, but their authors often have only a narrow expertise. Also describes the role of the Australian Academy of Science in publishing textbooks.

046 Brown, S. and Nathenson, M.
'Designing instructional materials: guesswork or facts?'
Distance Education, 2: 1, 7-22 (1981)
Reports a study of mathematical skills and learning capabilities of new students in Open University courses in Britain as part of a strategy for ensuring that the design of instructional materials used in the courses matches their skills and capabilities.

047 Butler, J. and Milliken, M.
'Writing geography textbooks'
Geographical Education, 5: 1, 3-4 (1985)
Describes the procedures used by two teacher-authors of popular geography textbooks, what they have attempted to accomplish and difficulties they encountered.

048 Colbourne, R.F. and Brockley, B.P.
'Teacher attitudes to primary school science and structured

science curriculum material'
New Education, 3: 2, 95-101 (1981)
Describes the development of a composite teacher's guide and curriculum material, the *BCAE Weekly Science Program and Resource Units*, by the Science Education Department of the Bendigo College of Advanced Education, intended to overcome limitations in the existing curriculum. Also reports the results of a survey of 500 teachers on their perceptions of the effectiveness of the material.

049 Cook, T., Grant, C., Re, T. and Worland, J.
'Why not develop your own environmental readers?'
Reading Education, 6: 1, 66-71 (1981)
Presents a rationale and set of guidelines for developing reading materials that take account of the cultural situation of Australian Aboriginal children. Also recommends the types of resources, the use of situational analysis and types of appropriate materials to develop.

050 Coppell, B.
'The Murawina Readers: a first report on the development of community related curriculum materials'
Reading Education, 3: 2, 27-30 (1978)
Describes the development of the Murawina Readers, a series of basal reading materials designed for Aboriginal children in Sydney, and explains how they have met some of the special needs of migrant and Aboriginal children.

051 Coppell, W.G.
'The Murawina Readers: a first stage in the development of community related curriculum materials in an Aboriginal context'
Aboriginal Child at School, 7: 1., 47-51 (1979)
Describes the rationale for developing the Murawina Readers, a series of basal reading materials designed for Aboriginal children in Sydney, and reports surveys of teachers' and students' perceptions indicating that the materials had achieved most objectives.

052 Demant, D.
'Packit: the making of an educational kit'
Com 3, 15: 1, 3-6 (1989)
no review

053 Dircks, R.
'The contribution of the Australian Academy of Science to science education in Australia'
Australian Science Education Teachers Journal, 34: 2, 84-88 (1988)
Describes the involvement of the Australian Academy of Science in developing curriculum materials based upon the Biological Sciences Curriculum Study, and sponsoring the development of curriculum materials through the School Chemistry Project, School Geology Project and School Physics Project.

054 Hedberg, J.G.
'Desktop publishing and better design in educational materials'
Education Research and Perspectives, 14: 1, 69-81 (1987)
Discusses the scope for improving the designs of instructional materials through the application of desktop publishing facilities available on microcomputers.

055 Hudson, W.
'Of piper-playing and tune-calling: Dartmouth and the educational publisher'
Pivot, 7: 3, 16-19 (1980)
Discusses how educational changes have influenced the publishing industry, and predicts probable consequences for the future.

056 Hughes, P. and Kennedy, K.J.
'Evaluating the impact of the Curriculum Centre in Australia'
Studies in Educational Evaluation, 13: 3, 297-305 (1987)
Describes the activities of the Curriculum Development Centre, and analyses its evaluation activities in program monitoring and project evaluation, citing reported research on its effectiveness in disseminating and implementing curriculum materials in schools.

057 Kember, D. and Kemp, H.
'Computer-aided publishing and open learning materials'
British Journal of Educational Technology, 20: 1, 11-26 (1989)
Discusses the potential impact of computer-aided publishing hardware and software on the production of instructional materials for distance education. Also compares and assesses the available computer-aided publishing systems in relation to

the production of instructional materials.

058 Kennedy, K.J. and McDonald, G.
'Designing curriculum materials for multicultural education: lessons from an Australian development project'
Curriculum Inquiry, 16: 3,311-326 (1986)
Describes decision-making processes involved in designing a curriculum material, *An Indian Ocean People*, on the family life styles of ethnic groups whose country of origin was in the Indian Ocean region but who had settled in Western Australia.

059 Levin, M.
'Feminism and textbooks'
ACES Review, 10: 3, 12-15 (1983)
Discusses the effects of guidelines for sex fairness, imposed on the commercial textbook industry, upon the quality of instructional materials.

060 Madin, J.
'Investigating the National Estate: a developer's perspective'
Ethos, 11: 1, 2-11 (1981)
Describes the development and design of the instructional material, *Investigating the National Estate*, produced by the Curriculum Development Centre and the Australian Heritage Commission.

061 Marland, P.W. and Store, R.E.
'Some instructional strategies for improved learning from distance teaching materials'
Distance Education, 3: 1, 72-106 (1982)
Examines the use of advance organisers, overviews, pretests, objectives, inserted questions and devices in typography and graphics to facilitate learning at a distance, and presents guidelines for their use.

062 McLeod, J.
'Writing teaching materials for TAFE students'
Australian Journal of TAFE Research and Development, 1: 2, 127-130 (1986)
Discusses a concern that many writers of curriculum materials at the higher education level do not consider the user's perspective, and suggests how materials could be improved by taking this into account.

063 Morgan, R.
'The maladministration of innovation'
The Journal of Educational Administration, 16: 2, 187-199 (1978)
Argues that criticisms of the centre periphery model for development of curriculum materials fail to distinguish between two stages: production; and distribution. Analyses this weakness to be caused by the isolation of support agencies from one another, and suggests that a more articulated pattern for development of curriculum materials would be possible in Britain and Australia.

064 Naidu, S.
'Faculty involvement in instructional materials development for distance study at the University of the South Pacific'
Distance Education, 8: 2, 176-189 (1987)
Reports a study of involvement by members of the University's teaching staff in instructional materials development for distance education in terms of time spent, levels of satisfaction with the products, and how the process could be improved.

065 Paul, C. and Paul, P.
'The case for specially created materials for learners of English as a second language'
Australian Journal of Adult Education, 25: 3, 4-8 (1985)
Identifies that there is a shortage of suitable instructional materials for learners of English as a second language in library collections, and argues that materials should be developed that address their requirements for communicative competence.

066 Print, M.
'Curriculum materials for able children'
Gifted Education International, 1: 2, 103-106 (1983)
Describes a project, initiated at Mt. Lawley College in Western Australia, to develop curriculum extension project packs for primary grade students who demonstrate outstanding ability.

067 Stowell, R. and Bentley, L.
'Introducing "New Wave Geography"'
Geographical Education, 5: 4, 44-45 (1988)
Describes the preparation of a two-book series of geography

textbooks by the Geography Teachers Association of Victoria.

068 Sullivan, J.
'Environmental education: developing locally based readers'
The Primary Journal, 1, 26-31 (1982)
Describes the process used by a group of teachers at a rural primary school in New South Wales to develop a reader on environmental education.

069 Treagust, D.F., O'Loughlin, M.J. and Dekkers, J.
'An approach to curriculum dissemination through an education centre'
Curriculum Perspectives, 5: 2, 49-52 (1985)
Describes a plan for using education centres as focal points for diffusing curriculum materials, and presents a case study of its implementation at the Fremantle Education Centre in Western Australia. Also describes the plan as including five stages: initiation of dissemination; establishing external structure; small-scale implementation; workshops, and school-based developments.

070 Treece, U.
'The role of Australian curriculum libraries in education today'
Australasian College Libraries, 4: 1, 3-7 (1986)
Reports the findings of survey of 31 curriculum service centres, holding collections of instructional materials, within the education faculties of Australian institutions of higher education on their organisation, administration, collections and equipment.

071 Watson, D.
'Developing curriculum materials in the humanities area'
Com 3, 11: 4, 24-25 (1985)
no review

072 Watson, V.
'Modifying written materials for secondary students'
Australian Journal of Remedial Education, 16: 1, 15-16 (1984)
Argues that teachers should revise student exercises contained within instructional materials to suit students' abilities, and presents guidelines to accomplish revisions.

1.2.2 Innovation and Reform Efforts

073 Edwards, J.
'Materials development: important factors not always considered'
Australian Science Teachers Journal, 22: 3, 41-50 (1976)
Discusses experiences and suggests approaches to produce curriculum materials for the Australian Science Education Project, and their application to in-service training of curriculum developers.

074 Eliot, M.
'The Social Education Materials Project (SEMP): some negative aspects'
Curriculum Perspectives, 1: 1, 55-63 (1980)
Reports the findings of two case studies on students' and teachers' perceptions of their use of instructional materials produced by the Social Education Materials Project (SEMP).

075 Fisher, D.L. and Fraser, B.J.
'A replication of the effects of using ASEP materials on students' attitudes'
Australian Science Teachers Journal, 26: 2, 80-82 (1980)
Compares the findings of three studies, one conducted in Victorian schools and the others in Tasmanian schools with samples of seventh graders, to identify whether curriculum materials produced by the Australian Science Education Project (ASEP) were more effective in increasing student achievement than other materials. The results of each study indicated that the ASEP materials were more effective.

076 Gough, N.
'Curriculum development and teacher development in a materials evaluation project'
Curriculum Perspectives, 3: 1, 37-42 (1983)
Examines the way in which innovative curriculum materials, produced in the Evaluation of Exploring Childhood Project commissioned by the Curriculum Development Centre between 1979 and 1981, appear to assist both as a medium for curriculum development and for professional development of teachers.

077 Madin, J.
'The Social Education Materials Project (SEMP): some positive

aspects'
Curriculum Perspectives, 1: 1, 45-53 (1980)
Describes the aims and processes used by one state team in the Social Education Materials Project (SEMP) for developing instructional materials of the program, Family, and for implementing the materials in Australian schools.

078 Marsh, C.J.
'Teachers' use of the Social Education Materials Project (SEMP)'
Australian Journal of Education, 27: 3, 249-259 (1983)
Describes the dissemination and use of curriculum materials produced in the Social Education Materials Project during 1975 and 1976, and provides four case studies of their use by individual teachers.

079 Marsh, C.J. and Carter, D.
'An analysis of formative diffusion strategies used by project teams associated with the Social Education Materials Project (SEMP)'
Australian Journal of Education, 24: 3, 302-314 (1980)
Describes the strategies used by project teams, operating in each state during 1975 and 1976, to diffuse curriculum materials produced by the Social Education Materials Project (SEMP). Also assesses the influence of the strategies upon teachers who have adopted SEMP materials by comparing uses made of particular strategies with these proposed in diffusion models.

080 Northfield, J.
'Curriculum dissemination: learning from experience'
Curriculum Perspectives, 3: 2, 56-60 (1983)
Describes activities in the Australian Science Education Project (ASEP) and Social Education Materials Project (SEMP) in producing and disseminating curriculum materials, and analyses the effectiveness of the dissemination strategies.

081 Owen, J.
'Three years on: the impact of ASEP materials in Australian schools'
Australian Science Teachers Journal, 22: 3. 15-24 (1976)
Reports a survey of a sample of teachers in all Australian states and territories, except the Northern Territory, on their use of curriculum materials developed by the Australian Science

Education Project (ASEP), as well as other instructional materials for science programs. The findings indicated that the extent of use of ASEP materials depended upon the use of other materials.

082 Owen, J.
'The diffusion and utilisation of the Australian Science Education Project materials'
SASTA Journal, 763, 48-50 (1976)
Discusses curriculum planning in science and reviews the use of materials produced during the Australian Science Education Project.

2 EVALUATION AND CRITICISM OF INSTRUCTIONAL MATERIALS

2.1 General Discussion and Special Topics

2.1.1 General References

083 Broadbent, M.
'Networking, school libraries and curriculum information: current issues and concerns
Australian Library Journal, 32: 2, 3-10 (1983)
Examines activities in the development of the Australian Bibliographic Network, the national schools cataloguing service and the Australian Education Council Curriculum Materials Committee.

084 Broadbent, M. And Kemp, B.
'Meeting curriculum information needs
Curriculum Perspectives, 3: 2, 3-7 (1983)
Discusses the needs of teachers for curriculum information, and describes the development of curriculum information services by the Curriculum Development Centre, the Australian Council for Educational Research and the activities of the Curriculum Materials Committee established by the Australian Education Council in 1981.

085 Jeffery, P.
'Some progress and problems in materials evaluation'
Modern Teaching, 36, 16-21 (1976)
Discusses the role of the Australian Council for Educational

Research in developing processes and products, based upon those used by the Educational Products Information Exchange Institute, to evaluate curriculum materials, and describes the design of an instrument, the Review Guide.

086 Jeffery, P.
'Research confirms school librarian's important role in dissemination to teachers'
Journal of the School Library Association of Queensland, 16: 2, 5 -6 (1984)
Reports the results of a survey of a sample of teachers on their use of particular sources of information about curriculum materials. The findings indicated that teachers prefer to use and value informal sources involving personal contacts.

087 Krister, L.
'Evaluating instructional packages'
Australian Journal of Adult Education, 24: 1, 11-17 (1984)
Presents a set of instruments for evaluating training materials, which commences with the selection of media formats and then provides guidelines for deciding whether a given resource is suited in terms of its organisation, content and appropriateness.

088 Marsh, C.J.
'Curriculum materials analysis in social studies methods classes'
The Social Studies, 74: 3, 107-111 (1983)
Reports the findings of a survey of social studies professors in Australian colleges and universities that showed curriculum materials analysis is not a major emphasis in elementary methods courses.

089 Reynolds, A., Haymore, J., Ringstaff, C. And Grossman, P.
'Teachers and curricular materials: who is driving whom?'
Curriculum Perspectives, 8: 1, 22-29 (1988)
Reports a study of variables affecting beginning teachers' evaluations of curriculum materials and their decisions to modify materials for use in the classroom.

090 Singh, M.G.
'Towards a strategic redefinition of intercultural studies'
Discourse, 7: 2, 69-85 (1987)
Discusses the issue of adopting more appropriate practices in

developing, selecting and evaluating curriculum materials used in multicultural education within the Multicultural Education Program. Also recommends participation of ethnic community members in the processes, and describes procedures for defunct the issue.

091 Stannus, M.J.
'NCIN'
Secondary Library Newsletter, 19: 30, 16-17 (1986)
Describes the New South Wales Curriculum Information Network (NCIN) developed to provide a better exchange of evaluative information on curriculum research and curriculum materials within the New South Wales Department of Education.

092 Strube, P
'Genre theory and textbook criticism: non-fiction as literature'
English in Australia, 75, 28-32 (1986)
Argues that it is appropriate to apply literary criticism to non -fictional materials, such as textbooks, through the application of genre theory.

093 Watt, M.G.
'The exchange of information on instructional materials: an evaluation of planned change in Australian education'
Australian Journal of Educational Technology, 5: 2, 77-88 (1989)
Describes a plan for a program to establish a clearinghouse for exchanging information on instructional materials used in Australian schools.

094 Williams, M.C. and Lowther, R.G.
'Courses, kits, aids and games evaluated: assistance for teachers in selecting educational material'
Education (WA), 25: 1, 25-26 (1976)
Describes the process occurring in a project, initiated by the Curriculum Branch of the Western Australian Department of Education, to evaluate instructional materials in a variety of media and to communicate the evaluations to teachers.

2.1.2 Readability

095 Anderson, J.
'Lix and Rix: variations on a little-known readability index'

Journal of Reading, 26: 6, 490-496 (1983)
Describes the development and adaptation of the Lasbarhetsindex (Lix), a readability formula developed in Sweden, reports validity data, and describes the development by the author of a variant, the Rix readability formula.

096 Anderson, J. and Coates, J.
'The teacher's dilemma: how to gauge the suitability of reading materials'
Australian Journal of Reading, 2: 3, 135-142 (1979)
Discusses a variety of procedures for matching readers and reading materials, and examines the construction, scoring and interpretation of cloze procedure.

097 Beiers, R.J. and Anderson, J.
'Declining levels of literacy or increased reading demands on students?'
South Australian Journal of Educational Research, 1: 1, 76-82 (1978)
Reports a study of the readability of geology and chemistry textbooks adopted in South Australia for the upper secondary level between 1929 and 1978. The findings indicated that recent publications were more difficult to read.

098 Bouffler, C.
'Predictability: a redefinition of readability'
Australian Journal of Reading, 7: 3, 125-134 (1984)
Discusses research findings calling into question the notion of readability and the application of readability formulas to basal reading materials.

099 Edwards, P.J.
'You've bought it but can they read it? or conversely, you're thinking of buying it but will they be able to read it?'
Primary Journal, 4, 32-35 (1979)
Discusses the role of readability in selecting instructional materials, and examines the procedures for scoring four readability formulas: Fry; SMOG; FOG; and cloze.

100 Elkins, J. and Davies, G.
'Logical connectives and readability of textbooks'
Reading Education, 3: 2, 15-23 (1978)
Discusses the concept of logical connectives, which refer to

coordinating, qualifying or adverbial conjunctions used to link a simple proposition with another idea to form a complex proposition, and investigates their use in cloze passages. Findings indicated that students found considerable difficulty with replacement of logical connectives, suggesting that relating concepts is a specific source of difficulty in reading secondary school texts.

101 Green, M. and Morris, B.
'Practical application of cloze tests to assess readability'
Reading Education, 2: 2, 11-13 (1977)
Reports a study into the selection of representative cloze passages from a textbook, in which twelve passages were selected from a single text to demonstrate the wide range of difficulty. The results indicated that merely sampling the book by choosing three passages is an unsatisfactory method of identifying a representative passage.

102 Henderson, J.
'Two-level readers - an investigation'
Australian Journal of Reading, 2: 3, 152-157 (1979)
Reports a study of the readability and human interest by using the Flesch formula on two, two-level series of basal readers, one level designed for average readers and the other for readers experiencing difficulties. The findings indicated minimal differences between the two levels for both series.

103 MacDonald, T.H.
'How can I study science when I can't read the book?'
Australian Journal of Reading, 3: 3, 137-142 (1980)
Reports a study of the perceptions of teachers at Newcastle schools in New South Wales on students' difficulties in reading science textbooks which were measured by the Fry and SMOG readability formulas. The findings indicated that there was a mismatch between readers and their textbooks.

104 MacPherson, R.J.S. and Kammann, V.
'Textbook readability'
Education (WA), 30-31 (1980)
Reports a study in which the reading ages of a sample of eighth graders at Manjimup Senior High School in Western Australia were measured by the Gapadol Reading Comprehension Test and the readability of four of their textbooks was measured by the

Fry formula. The findings indicated that there was a mismatch between readers and their textbooks.

105 Pirozzo, R.
'Bridging the gap between low reading ability and high text difficulty in the secondary school'
Australian Journal of Reading, 5: 4, 192-201 (1982)
Reports a study in which the reading ages of ninth graders were measured by the Gapadol Reading Comprehension Test and the readability of their citizenship education textbook was measured by the Fry formula. The findings indicated that there was a mismatch between the readers and their textbook, and recommended that the content of the textbook be rewritten.

106 Wagner, G.
'Using readability formulas in the classroom'
Set, 1, item 13 (1981)
Discusses the use of teacher estimates, direct assessment and prediction formulas as means of estimating prose readability, compares the practicality of various readability formulas for teacher use, and describes the development of a computer-based program at the New Zealand Council for Educational Research for calculating Flesch scores.

2.1.3 Treatment of Minorities and Women

107 Anderson, J. and Yip, L.
'Are sex roles represented fairly in children's books? A content analysis of old and new readers'
Unicorn, 13: 3, 155-161 (1987)
Reports a content analysis of two series of basal reading materials for the lower primary level, one published in 1966 and the second in 1980, intended to identify changes occurring in the representation of sex roles during the intervening period.

108 Christie, F.H.
'Woman in school texts'
Education News, 15: 4 & 5, 46-49 (1975)
Analyses the representation of female roles in textbooks used in Australian schools during the late nineteenth century.

109 Cope, B.
'Racism in textbooks: from assimilation to multiculturalism'

Education Links, 33, 11-13 (1988)
Analyses racism in Australian history and social studies textbooks, published since 1945, identifying a shift from an assimilationist to a multicultural perspective.

110 Crago, H.
'Sexism, literature and reader-response: a reply to Christine Nicholls'
Orana, 17: 4, 159-162 (1981)
Disputes the interpretation of the effects of sexism in supplementary reading materials presented in the article, 'Sexism and children's literature: a perspective for librarians'.

111 Davies, C.
'The image of women in ESL materials'
Polycom, 38, 15-20 (1984)
no review

112 Hoppe, A.
'Goodbye Dick and Jane: hello, Chiang and Chiquita Applebaum'
Educational Magazine, 32: 5, 32-34 (1975)
Offers a humorous examination of bias in instructional materials from a publisher's viewpoint.

113 Ives, R.
'The maleness of science'
Australian Science Teachers Journal, 30: 1, 15-20 (1984)
Discusses the way that the pervading male representations in the style, content and illustrations in science textbooks influence females negatively towards the study of science.

114 James, J.
'Children's books and sex roles'
Quest, 17, 30-34 (1975)
Reports a survey of sex role stereotyping in more than 400 reading materials for the primary level in a school library collection, and cites examples of both girl-oriented and boy-oriented characteristics in a selection of the materials.

115 Kociumbas, J.
'"What Alyce learnt at nine": sexuality and sex roles in children's literature to 1914'
History of Education Review, 15: 2, 18-36 (1986)

Discusses bias in the representation of sexuality and sex roles in reading materials for children published in Australia before 1914.

116 Lippmann, L.
'Race prejudice and educational materials: kids' reading'
Learning Exchange, 80, 14 (1979)
no review

117 Lippmann, L.
'Survey of racial and ethnic bias in primary textbooks'
Wikaru, 12, 107-123 (1983)
no review

118 Logan, C.
'Criteria for judging bias in literature'
Review Bulletin, 18: 3, 10-13 (1986)
Describes criteria to identify elements of bias, such as stereotypes, archetypes and tokenism, in reading materials.

119 Maxwell, A.
1976 'Sexism in fairy tales of Andersen and Perrault: a study'
Children's Libraries Newsletter, 12: 1, 20-30 (1976)
Reports the findings of a study on sexist stereotypes in a sample of reading materials for young children.

120 McVitty, W.
'Australia through its children's books'
Social Education, 48: 6, 449-450 (1984)
Discusses how reading materials, published in Australia, reflect stereotypes of Australian society.

121 Mortimer, M.
'Sex stereotyping in children's books'
Australian Journal of Early Childhood, 4: 4, 4-8 (1979)
Reviews the research literature on sex stereotyping in the characterisation of reading materials for young children, and recommends counteracting the use of sexist biases through three means: communication with authors; applying evaluative criteria to identify bias; and alerting teachers.

122 Mortimer, M. and Bradley, D.
'The image of women and girls in children's books'

Australian Library Journal, 28: 6, 87-93 (1979)
Discusses issues relating to bias in the representation of females in reading materials for young children through review of research literature.

123 Nicholls, C.
'Sexism and children's literature: a perspective for librarians'
Orana, 17: 3, 105-111 (1981)
Discusses specific instances of sexism in reading materials for young children and recommends guidelines for librarians to implement to extend the range of non-sexist materials in collections.

124 Rasmussen, B.
'Dealing with sexism and ethnocentrism in literature'
English in Australia, 60, 54-57 (1982)
Discusses issues relating to the selection of non-sexist and non-racist reading materials.

125 Rennie, L.J. and Mottier, I.
'Gender inclusive resources in science and technology'
Australian Science Teachers Journal, 35: 3, 17-22 (1989)
Reviews research into sex bias in curriculum materials, analyses some current general science textbooks revealing that bias still exists and presents a set of guidelines to select and prepare curriculum materials which present science as a human activity.

126 Richards, P.
'Look I'm not a racist but...'
Education Links, 33, 4-26 (1988)
Describes a project, trialled at Cabramatta High School, New South Wales, to investigate racism in curriculum materials and to produce non-racist material.

127 Van Wageningen, B.
'Prejudice in writing: analysing texts for bias'
Multicultural Education Newsletter, 35, 3-6 (1985)
no review

128 West, E.
'The treatment of Aborigines in print'
Polycom, 31, 14-17 (1982)

no review

2.2 Subject Matter Content Coverage

2.2.1 Language Arts

129 Bunbury, R., Corcoran, B. and Ross, K.
'Power-choice over the English curriculum'
Australian Journal of Reading, 7: 4, 181-195 (1984)
Reports the findings of a survey of a sample of 492 teachers on their perceptions of decision-making authority in determining the content of language arts programs, and the balance between teacher and student involvement in selecting reading materials.

130 Goodrich, R.A.
'Three typical textbooks: assumptions and shortcomings'
The Teaching of English, 45, 36-41 (1983)
Analyses the teaching and learning methods presented in each of three textbooks widely used in Victoria for language arts programs, one in the early 1950s, another in the early 1960s and the last in the early 1970s, and relates their approaches to the prevailing educational philosophies of their time.

2.2.2 Mathematics

131 Hameston, M.
'"Nothing is but what is not": getting to grips with points, lines and planes'
Idiom, 11: 5, 12-14 (1976)
Discusses issues relating to the evaluation of textbooks, and reviews a mathematics textbook.

132 Long, T.
'The selection of materials for mathematically talented students'
Rhombus, 8: 3, 16-19 (1980)
Analyses the attributes of appropriate instructional materials for mathematics to be used with gifted learners, and describes educational services available to gifted students in Western Australia.

133 Morony, W.
'Textbook checklist'

Australian Mathematics Teacher, 45: 2, 13 (1989)
Presents a checklist for teachers to evaluate mathematics textbooks.

2.2.3 Reading

134 Baker, C. D. and Freebody, P.
'"Constituting the child" in beginning school reading books'
British Journal of Sociology of Education, 18: 1, 55-76 (1987)
Reports a content analysis of how particular images of the child, as character in the books and as reader of the books, are constructed in basal reading materials.

135 Bradley, E.
'Using literature as an alternative to reading schemes'
Journal of the School Library Association of Queensland, 16: 4, 13-15 (1984)
Describes the activities of researching, developing, implementing and evaluating a reading program at a rural primary school in Queensland, in which fictional literature replaced the use of basal reading materials.

136 Cairney, T.H.
'The purpose of basals: what children think'
The Reading Teacher, 41: 4, 420-428 (1988)
Reports a study of a sample of students in rural New South Wales' primary schools on their perceptions of the purpose of reading. The findings showed that the subjects held negative perceptions towards the use of basal reading materials.

137 Freebody, P.
'The effects of vocabulary difficulty on text comprehension: review of research literature'
Reading Education, 6: 1, 4-12 (1981)
no review

138 Luke, A.
'Making Dick and Jane: historical genesis of the modern basal reader'
Teachers College Record, 89: 1, 91-116 (1987)
Describes the development of the Curriculum Foundation Readers or Dick and Jane series in the United States between 1935 and 1965 by examining the dominant intellectual and economic

considerations of their authors and publishers.

139 Pirozzo, R.
'Making sense of textbooks'
Education News, 17: 11, 40-41 (1982)
Reports the findings of a study at a secondary school on students' reading comprehension and readability of textbooks, and recommends student involvement in the selection of textbooks.

140 Unsworth, L.
'Muddling, modelling and meddling: reading in the content areas'
Australian Journal of Reading, 5: 1, 6-18 (1981)
Discusses the issue of mismatch between readers' skills and textual demands of reading materials and proposes a variety of teaching-learning methods to overcome mismatchs.

141 Wadelton, H.
'Knowing the script: a way to assess the good old reader'
Australian Teacher, 10, 10 (1984)
Discusses the need for teachers to evaluate basal readers and suggests guidelines.

142 Wilson, L.
'Reading schemes: who needs them?'
Australian Journal of Reading, 5: 2 ' 71-76 (1982)
Argues from the basis of interactive theory that reading schemes should be replaced by fictional reading materials.

2.2.4 Science

143 Bartels, G.
'A review of earth sciences material for the junior and secondary school'
Lab Talk, 25: 1, 23-26 (1981)
no review

144 Clarke, J.A.
'A model for pre-trial formative curriculum evaluation: its development and application'
Australian Journal of Education, 19: 3, 251-267 (1975)
Reports the findings of a content analysis of the curriculum material, *Pushes and Pulls*, produced by the Australian Science

Education Project (ASEP) by using the Thematic and Structural Analysis Technique, and the revision of the material based upon the results. Also compares the results of a field-test of the original and revised versions of the material, showing the revised version improved student achievement.

145 De Berg, K.C.
'The emergence of quantification in the pressure-volume relationship for gases: a textbook analysis'
Science Education, 73: 2, 115-134 (1989)
Examines the possibility that part of the problem in the teaching of physical science may lie in instructional materials. Selects a sample of chemistry and physics textbooks, and analyses them on the basis of learning theory and scientific literacy.

146 Johnstone, A.H. and Reid, N.
'Interactive teaching materials in science'
SASTA Journal, 812, 4-15 (1981)
Describes the rationale underlying the development of curriculum materials on chemistry used in Scotland, the content of the materials, the use of a questionnaire to provide learner verification on the use of the materials.

147 Lowe, P.K.
'Producing science curriculum materials: some reflections concerning readability and the development of understanding'
Australian Science Teachers Journal, 35: 1 , 18-26 (1989)
Describes approaches used to revise curriculum materials in a major science curriculum project, and suggests alternative strategies by which the instructional potential of examples and illustrations can be exploited more fully in the design of curriculum materials.

148 Lynch, P.P. and Strube, P.
'Tracing the origins and development of the modern science textbook. Are new books really new?'
Australian Science Teachers Journal, 29: 3, 27-36 (1983)
Describes the development of physical science textbooks between 1820 and 1900, identifying four types, and concluding that today's textbooks show similarities in structural, linguistic and stylistic characteristics.

149 Lynch, P.P. and Strube, P.

'What is the purpose of the science textbook? A study of authors' prefaces since the mid-nineteenth century'
European Journal of Science Education, 7: 2, 121-130 (1985)
Reports a content analysis of the prefaces of 300 science textbooks published over a time span of 100 years, revealing changes in stated purpose from the changing view of the nature of science and science teaching to the relationship between science, religion, philosophy and politics.

150 Lynch, P.P. and Strube, P.
'Ten decades of the science textbook: a revealing mirror of science education past and present'
Journal of Science and Mathematics Education in Southeast Asia, 8: 2, 31-42 (1985)
Argues that the development of modern science education has evolved in a way that can be charted by an examination of science textbooks since their beginnings in the mid-nineteenth century.

151 Prosser, M.
'Cognitive analysis of physics textbooks at the tertiary and college level'
Science Education, 63: 5, 677-63 (1979)
Reports a study, investigating the intellectual requirements of the mechanics section of a first-year college physics textbook, in which instructional and prerequisite concepts were classified in terms of intellectual skills required to understand them.

152 Prosser, M.
'Relationship between the cognitive abilities of a group of tertiary physics students and the cognitive requirements of their textbooks'
Science Education, 67: 1, 75-83 (1983)
Reports the results of a study, in which the relationship between the cognitive requirements of two chapters of a physics textbook for biology pre-med students and their ability to use prerequisite reasoning skills for its understanding was investigated.

153 Strube, P.
'Eight decades of physics textbooks: what are they saying?'
Australian Science Teachers Journal, 30: 3,40-44 (1984)

Discusses ways physics textbooks, used in Tasmanian high schools since 1900, have presented the themes of energy, matter and fields, concluding that there is a stability of expression, and superficiality and abstraction in the treatment of the topics.

154 Strube, P.
'The presentation of energy and fields in physics texts: a case of literary inertia'
Physics Education, 23: 6, 366-371 (1988)
Reports a content analysis of five physics textbooks published over an interval of 84 years on the presentation of topics on energy and fields. The findings indicated common features used by each of the authors.

155 Strube, P.
'The notion of style in physics textbooks'
Journal of Research in Science Teaching, 26: 4, 291-299 (1989)
Presents a set of criteria for assessing stylistic character of physics textbooks in terms of prose structure, word choice and literary characterisation.

156 Strube, P.
'A content analysis and explanations presented to students in physical science textbooks: a model and an example'
International Journal of Science Education, 11: 2, 195-202 (1989)
Presents a model for a quantitative content analysis of textbooks, and applies the model to analyse the language of ten physical science textbooks over a seventy year time span, revealing the persistence of language characteristics.

157 Strube, P. and Lynch, P.P.
'Some influences on the modern science text: alternative science writing'
European Journal of Science Education, 6: 4, 321-338 (1984)
Discusses the stylistic development of four types of physical science textbooks, written between 1820 and 1900, concluding that the structural, linguistic and stylistic attributes of today's textbooks have been influenced by nineteenth century textbook writing.

158 Wilkinson, J.

'The textbook approach to teaching elementary science'
Lab Talk, 28: 4, 34-35 (1984)
no review

2.2.5 Social Studies

159 Birchall, P. and Faichney, G.
'Images of Australia in elementary social studies texts'
The Social Studies, 76: 3, 120-124 (1985)
Reports the results of a content analysis of a sample of American social studies textbooks on the quantity and quality of information on Australia, indicating that their images do not equate with the reality most Australians experience.

160 Hoban, M.
'An evaluation of junior history textbooks'
Agora, 21: 2, 8-15 (1986)
Describes the Junior History Materials Project, in which history textbooks used in the junior secondary level of Victorian schools were evaluated with the intent to providing guidelines for developing new materials with multicultural and multilingual perspectives.

161 Noronha, L.
'The presentation of India in Australian textbooks'
Ethnic Studies, 2: 3, 80-83 (1978)
Describes the results of a study of bias in the representation of India in Australian textbooks, and discusses a typical example contained in one widely used textbook.

162 Palmer, W.S.
'Evolving criteria for evaluating sex education books'
Review, 12: 1, 8-19 (1984)
Presents a checklist of criteria, derived from a content analysis of most recommended textbooks, for evaluating instructional materials on sex education.

163 Sherry, M.
'Criteria for evaluating resource materials for use in consumer education'
Narration, 14: 3, 101-103 (1975)
Outlines criteria for evaluating instructional materials for

consumer education, presents a set of guidelines for applying the criteria, and identifies sources for appropriate instructional materials.

2.3 Ideology and Controversy

2.3.1 Ideology and Instructional Materials

164 Freebody, P.and Baker, C.D.
'Children's first schoolbooks: introductions to culture of literacy'
Harvard Educational Review, 55: 4, 381-398 (1985)
Reports the results of a content analysis of a sample of basal and supplementary materials for beginning readers used in New South Wales, and discusses ways in which beginning reading materials present cultural perspectives to young children.

165 Olson, J.K.
'School inc: corporate materials in schools'
The Australian Administrator, 9: 6, 1-4 (1988)
Discusses the way in which the values of corporatism intrude into schools through the instructional materials used in classrooms.

166 Seddon, T.
'Con-texts'
Radical Education Dossier, 21,37-39 (1983)
Describes the international dispute in 1982 over accounts of Japanese history in textbooks highlighting implicit militarism, and examines the militaristic content of Australian textbooks, arguing that this must be replaced with a pacifist ideology.

167 Seddon, T.
'Politics and curriculum: a case study of the Japanese history textbook dispute 1982'
British Journal of Sociology of Education, 8: 2, 213-226 (1987)
Examines the international controversy which erupted in 1982 over state authorised changes to Japanese history textbooks in terms of political, economic and social dynamics.

168 Williamson-Fien, J.
The Japanese textbook crisis'
The History Teacher, 38, 52-77 (1985)

Examines the political aspects of the international dispute in 1982 between Japan and its neighbours, China and South Korea, over the portrayal of Japanese history in Japanese textbooks.

2.3.2 Controversy and Censorship

169 Anderson, L.J.
'What price realism? or the selection of adolescent literature dealing with controversial topics in the post-primary school'
School Library Bulletin, 10: 2, 37-46 (1978)
Discusses guidelines for selecting reading materials dealing with controversial topics, such as violence, death, drugs, family conflict, adolescent development, sexual issues, handicaps and war. A bibliography of materials, identifying controversial topics in specific materials, is appended.

170 Clyde, A.
'Censorship selection of school library materials'
South Coast Library Links, 9, 9-10 (1982)
no review

171 Dayman, S.
'Children's books: a burning issue'
Education (NSW), 66: 17, 12-13 (1985)
Discusses issues relating to the censorship of reading materials as represented by the views of Australian publishers and librarians.

172 Dellit, J.
'Censorship or selection?'
Idiom, 1, 7-9 (1986)
Discusses issues relating to the censorship of instructional materials and considers the role of the teacher in censoring controversial materials.

173 Duhs, L.A.
'MACOS/SEMP debate in Queensland, 1978: some central issues'
Australian Journal of Education, 2: 3, 270-283 (1979)
Describes the main issues surrounding the involvement of the Society to Outlaw Pornography and the Committee Against Regressive Education in the censorship of instructional materials produced in the social studies programs, Man: A Course of Study (MACOS) and Social Education Materials Project

(SEMP), in Queensland during 1978, and analyses the standpoints of the two opposing groups contending that their arguments were deficient.

174 McGregor, P.
'Is our school curriculum out of control?'
Institute of Public Affairs Review, 39: 2, 23-25 (1985)
Argues that some instructional materials used in Australian schools promote the views of radical minority groups.

175 O'Donnell, D.
'The churches and SEMP'
ACES Review, 7: 4, 9-13 (1980)
Discusses reported evidence on support offered by religious denominations for the use of curriculum materials produced by the Social Education Materials Project (SEMP), following their censorship by the state cabinet in Queensland during 1978.

176 Phillips, R.
'Censorship'
Category B, 5, 33-46 (1983)
no review

177 Singh, M.G.
'"School kit ban is defeated": a quasi-historical case study of curriculum innovation'
Journal of Intercultural Studies, 8: 2, 50-68 (1987)
Describes a case study of the Multicultural Education Curriculum Project, sponsored by the Queensland Department of Education, highlighting the public debate over the materials disseminated, and consequent developments occurring in multicultural education in Queensland.

178 Smith, R.A. and Knight, J.
'MACOS in Queensland: the politics of educational knowledge'
Australian Journal of Education, 22: 3, 225-248 (1978)
Describes the controversy over the use of curriculum materials from the social studies program, Man: A Course of Study (MACOS), in primary schools in Queensland during 1977. Also reports the results of a content analysis of fundamentalist writings by both the Committee Against Regressive Education and the Society to Outlaw Pornography, and materials from MACOS, showing the opposing materials present contradictory

attitudes.

179 Smith, R.A. and Knight, J.
'Political censorship in the teaching of social sciences: Queensland scenarios'
Australian Journal of Education, 25: 1, 2-23 (1981)
Describes the activities of the Society to Outlaw Pornography and the Committee Against Regressive Education in censoring instructional materials in Queensland including those from the social studies programs, Man: A Course of Study (MACOS) and Social Education Materials Project (SEMP). Also analyses the content of these social studies materials perceived to be dangerous, and poses scenarios for future development of this issue in Queensland.

2.3.3 Evolution Theory and Creationism

180 Parker, F. and Parker, B.
'Behind textbook censorship'
Education and Society, 6: 1 & 2, 111-116 (1988)
Describes the activities of People for the American Way in monitoring censorship objections brought by fundamentalist Christians in the U.S.A., citing current cases, and analyses issues in textbooks to which these people object.

181 Sperring, T.
'The evolution of "creation science"'
The Forum of Education, 45: 1, 23-35 (1986)
Describes both the development of the creationist movement in the United States and its influence upon censoring textbooks, and the activities of the Creation Science Foundation in Queensland in influencing decision-making on balanced treatment of the evolution-creation issue in education.

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Canberra, ACT: Australian Department of Education (1981)

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'Central America by the book: what children are learning'
Social Education, 47: 2, 102-109 (1983)

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Hillsdale, NJ: Erlbaum Associates (1984)

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'Reading comprehension instruction in the social studies'
Social Studies, 21, 36-48 (1986)

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'Readability formulas may be dangerous to your textbooks'
Educational Leadership, 42: 7, 18-20 (1985)

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'The crusade to ban books'
Education Digest, 47: 3, 2-5 (1981)

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New York, NY: John Wiley and Sons (1971)

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Melbourne, Vic: Australian Education Council (1989)

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'An aberrated image of science in elementary school science textbooks'
School Science and Mathematics, 75, 457-462 (1975)

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'The textbook and methods of instruction'
In Whipple, G.M., *The textbook in American education* (30th yearbook of the National Society for the Study of Education, Part II), 7-26
Bloomington,IL: Public School Publishing Co. (1931)

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'Some misconceptions and misunderstandings perpetuated by teachers and textbooks of

biology'
Journal of Biological Education, 18: 3, 201-205 (1984)

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'The dismal project: the portrayal of disability in basal readers'
Reading Improvement, 18, 42-47 (1981)

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'Effect of rewritten content textbook passages on middle grade students' comprehension of main ideas: making the inconsiderate considerate'
Journal of Reading Behavior, 18: 1, 1-21 (1986)

Belok, M.
'Schoolbooks, pedagogy books, and the political socialisation of young Americans'
Educational Studies, 12: 1, 35-41 (1981)

Blume, J.
'What kids want to read'
The National Elementary Principal, 61: 3, 6-7 (1982)

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'The Cooperative Research Program in first-grade reading instruction'
Reading Research Quarterly, 2: 4, 5-142 (1967)

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'Sexism in reading materials'
The Reading Teacher, 38: 8, 792-797 (1985)

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Social Education, 44: 6, 524-528 (1980)

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The provision, organisation and utilisation of learning resources in TAFE colleges: report on investigation supported by the Evaluative Studies Steering Committee of the Tertiary Education Commission
Adelaide, SA: South Australian Department of Technical and Further Education (1982)

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The student's right to know
Urbana, IL: National Council of Teachers of English (1982)

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'A multicultural analysis of a popular reading series in the International Year of the Child'
Journal of Negro Education, 48, 382-389 (1979)

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'Textbooks, transitions, and transplants'
The Arithmetic Teacher, 19, 381-385 (1985)

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'A comparison of recently published biology textbooks for first examinations'
Journal of Biological Education, 11: 3, 163-175 (1977)

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'A look at the basal-reading series'
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